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ABSTRACT

The papers in this volume were presented at the Fifth Annual Conference of the Western College Reading Association. Some of the titles of the papers are: "Reading/Study Skills Programs in Washington's Community Colleges: A Survey"; "The Pygmalion Plan"; "The Intermix Technique for Developing Study Skills"; "Reinforced Study"; "The Relationship of Study Skills and Attitudes, Library Skills, and Reading Skills to Academic Success"; "Evaluation: Toward Responsible Accountability"; "Otero Junior College's Reading/Study Skills Laboratory--A Supporting Service"; "The Individual Conference: A Winning Card"; "Implementation of Study Skills in Reading"; "The Process of Reading in Mathematics and Science"; "The Learning Center and the Mini Course"; "College Reading: Where It Is"; "Counseling Approach to Improvement of Reading at the College Level"; "Improving the Silence: Editor, Rebel, Apologist"; "The Conceptual Component of Speed Reading--A Theoretical Approach"; "Community Use of the College Reading and Study Center"; "Reading: Reproach and Rapproche"; "A Systems Approach to Establishing Accountability"; "The Implications and Use of Drawing Resources by the Teacher of Reading"; "Psycholinguistics and Reading"; and "An Investigation of Piaget's Developmental Aspects of Cognitive Functions." (WR)

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# PROCEEDINGS
# OF THE
# FIFTH ANNUAL CONFERENCE
# OF THE

# WESTERN
# COLLEGE
# READING
# ASSOCIATION

Volume V: Reading: Putting All the Cards on the Table

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# PREFACE

Twenty of the papers printed in this Annual Proceedings of the Western College Reading Association were delivered originally to WCRA participants at the Fifth Annual Conference in Sparks, Nevada. Five of the papers were delivered originally at the First Annual Southern California Regional Conference held in Los Angeles later in the spring of 1972. These five papers are marked with an asterisk in the Table of Contents.

Fourteen papers in this volume represent views of reading study specialists and directors from four-year colleges; nine papers were delivered by representatives of junior/community colleges; one paper represents the thoughts of a journal editor; and one paper was prepared by a graduate student interning in a junior college.

Inclusion of papers in this volume was determined by majority decision of a five-person editorial team that accepts responsibility for the presentation but not the content of papers. Arrangement of papers is alphabetical by author. None of the material preprinted here has been published previously.

SIXTH ANNUAL CONFERENCE: ALBUQUERQUE, April 12-14, 1973

SEVENTH ANNUAL CONFERENCE: OAKLAND, April 4-6, 1974

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*Delivered at the First Annual Southern California Regional Conference, East Los Angeles Junior College, May 20, 1972.

# PROCEEDINGS
# OF THE
# FIFTH ANNUAL CONFERENCE
# OF THE

WESTERN
COLLEGE
READING
ASSOCIATION

**Theme:** **Reading: Putting All the Cards on the Table**
March 23-25, 1972

Host Institution: University of Nevada, Reno, Nevada
Conference Location: John Ascuaga's Nugget, Sparks, Nevada

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# READING/STUDY SKILLS PROGRAMS IN WASHINGTON'S COMMUNITY COLLEGES: A SURVEY

**Lorraine M. Boothe**
Western Washington State College

The importance of efficient reading skills for success at the college level has been recognized for years. Consequently, programs in the areas of reading can be found in many institutions of higher education. The need for such services at the community college level is probably more pronounced in light of the student population served by this institution.

The function of these programs is to enhance and promote development of more effective skills as they relate to the particular content fields and to improve study habits. The stated purposes of such programs are:

1. increase academic efficiency
2. reduce attrition rates
3. provide a more effective basis for selection in conjunction with admission policies
4. increase study effectiveness
5. help students help themselves.

The purpose of this paper is to report a survey of reading and study skills services currently being offered in the community colleges in the state of Washington. A general inquiry was sent to the president of each community college requesting information relative to:

1. the presence of a separate department of reading or reading services of any kind;
2. course titles in the field of reading or reading habits;
3. number of academic credits, if any, and whether they were transferable or non-transferable to four-year institutions;
4. academic department which budgeted the program; and
5. related services.

Fig. 1. Survey Results (Summer 1971)

| COLLEGE | Yr. began | Stud. FTE | Sept. Dept. | Credits T | Credits N | Budget Eng. | Budget Hum. | Budget Psych | Budget Other | Related Math | Related Lang | Related Test | Related Train | Type |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Bellevue | '66 | 3229 | X | 1-5 | 1-5 |  |  |  | X | X | X | X | X | Mixed |
| Big Bend | '62 | 1308 |  | 1-5 |  | X |  |  |  | X | X | X |  | Rural |
| Centralia | '25 | 1916 |  | 3 | 3 | X |  |  |  |  |  | X |  | Rural |
| Clark | '33 | 2892 |  |  |  | Program began Fall 1971 |  |  |  |  |  |  |  | Mixed |
| Columbia Basin | '55 | 2684 |  |  | X | X |  |  |  | X | X |  |  | Rural |
| Edmonds | '67 | 1415 |  |  | 1-3 |  | X |  |  | X |  |  |  | Mixed |
| Everett | '41 | 3798 |  | 2 |  | X |  |  |  | X | X |  |  | Mixed |
| Ft. Steilacoom | '67 | 1661 |  | 2 | 2-3 |  | X |  |  | X | X |  |  | Mixed |
| Grays Harbor | '30 | 1449 |  | 3 |  | X |  |  |  | X | X | X |  | Rural |
| Green River | '65 | 3242 |  |  | 3 |  | X |  |  | X | X | X | X | Mixed |
| Highline | '61 | 4255 |  | 1-3 |  |  | X |  |  | X | X | X | X | Mixed |
| Lower Columbia | '34 | 1631 |  |  | 2-5 | X |  | X |  | X | X | X |  | Rural |
| North Seattle | '69 | 2368 |  | 0 | 0 |  | X |  |  | X | X |  |  | Mixed |
| Olympic | '46 | 2856 |  |  | 2-3 |  |  | X |  | X | X | X | X | Rural |

| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Peninsula | '61 | 969 | | | 2 | X | | | | X | X | X | | Rural |
| Seattle Central | '66 | 5578 | | | X | | X | | | | X | X | | Urban |
| Shoreline | '64 | 3775 | | | 5 | | X | | | X | X | X | | Mixed |
| Skagit Valley | '26 | 2124 | X | 2 | 2-5 | X | (Soon to be division) | | | X | X | X | | Rural |
| South Seattle | '66 | 718 | | | | | | | | | | | | Mixed |
| Spokane | '63 | 3470 | | | 3 | X | | | | X | X | X | X | Urban |
| Spokane Falls | '67 | 4062 | | | 3 | X | | | | X | X | | | Mixed |
| Tacoma | '65 | 3435 | | X | X | | | | X | X | | | | Urban |
| Walla Walla | '67 | 1219 | | | 2 | | X | | | X | X | X | X | Rural |
| Wenatchee Valley | '39 | 1389 | | 2 | 1-3 | X | | | X | X | X | X | X | Rural |
| Whatcom | '70 | 56 | | | | | | | | X | X | | | Rural |
| Yakima Valley | '28 | 2806 | | | 2 | | | X | | X | X | | | Rural |
| TOTALS = | | | 9% | 43% | 78% | 48% | 35% | 13% | 13% | 91% | 91% | 61% | 26% | |

Twenty-six community colleges were queried in the first half of 1971. One hundred percent (100%) replied.

Eighty-nine percent (89%) of the community colleges have reading and study skills programs of some kind. (By the Fall of 1971, however, 93% have these programs.) Seventy-two percent (72%) of these colleges reported courses in remedial reading. Sixty-one percent (61%) reported programs in developmental reading, and seventeen percent (17%) indicated programs which related specifically to study skills as such. Thirty percent (30%) of the community colleges indicated programs in speed reading; and ninety-three percent (93%) reported related services such as arithmetical skills, language skills, individual training programs, and testing programs. Four percent (4%) reported the programs were not offered for academic credit.

Additional data were reported:

1. 9% have separate reading departments.
2. 43% offer transferrable credit.
3. 78% offer non-transferable credit; 95% of the community colleges offer credit of some kind.
4. 48% of these programs are budgeted through the English department.
5. 35% are budgeted through the humanities division without first going through the English department.
6. 13% are budgeted through psychology.
7. 13% are budgeted in other ways, such as through student services, the science division, or as a separate division.
8. 91% include remedial math.
9. 91% include related language arts.
10. 61% utilize testing programs.
11. 26% have individual training programs.

Information relative to the numbering of courses was reported:

1. 91% of these community colleges offer reading/study skills courses below the 100-level. Forty-eight percent (48%) offer only below 100-level courses.
2. 43% offer reading/study skills courses above the 100-level. Seven percent (7%) have only above 100-level courses.
3. 56% offer more than one course below the 100-level.
4. 17% offer more than one course above the 100-level.

Selected course titles are:

1. Communication Skills
2. Readings on Reading and Thinking
3. Readings on Reading and Change
4. Accelerated Reading
5. Psychology of Study and Adjustment
6. Reading Clinic
7. Review Reading
8. Reading Development
9. Study Skills
10. Speed Reading and Reading Comprehension

One of the most obvious trends in reading programs in Washington is toward the learning laboratory concept, where students work at their own pace in the specific area or areas in which they need help. Also the newer the college is, in most cases, the more tuned-in they seem to be to facing up to these learning difficulties.

Another finding of this survey is that larger colleges (over 3,000 students FTE) offer more courses than smaller colleges (under 3,000 FTE). There seems to be a trend toward granting transferable credit for courses in the reading and study skills areas.

Finally, there is a minor trend toward division status for learning centers. Bellevue College has achieved this, and Skagit Valley College is organizing in this directior

The results of this survey indicate that Washington's community colleges have acknowledged that there is clearly a demand for these services at this educational level. Progress has been made but it is only a beginning.

## REFERENCES

1. Course Effort Report. Washington State Board for Community College Education. May, 1971. p. 9.
2. 1971 Junior College Directory. ERIC/CJC. pp. 78-89.

# THE PYGMALION PLAN

**Sally Brown and Ramona Fusco**
El Camino College

## I. ERA OF DISPOSABILITY

Today's students live in a throw-away society, an age of transcience described by Alvin Toffler in Future Shock as an environment which lacks stability, permanence, and thus security. (1) Our children grow up in a world which stresses the disposable: disposable bottles and diapers; disposable plates, paper clothes, streets, and buildings; disposable jobs, attitudes, and friendships; even disposable marriages and the resultant disposable parents. Toffler describes our new nomadic mode of life as a shift from place-related social structures to placeless, mobile, fluid structures in which we form limited involvements with other people as our mobility and urbanization create a deadly attrition of friends and acquaintances.

The insecure youth of today's technical, mechanical, and urbanized life are keenly aware of their throw-away age, with many of them attempting to escape this phenomena in various ways: using drugs, affecting change in personal appearance, living in communes, joining encounter groups, or hopping on the Jesus movement bandwagon. Their goal is human communication. The youth want to return to an age which afforded the time and simplicity of life for meaningful personal relationships. If we listen, we hear their desperate messages in their songs.

When students enter college, they soon find that campus environment differs little from their world off-campus. Rather, they discover that the impersonality is even more intense. Impersonality - the "Achilles heel" of academic life. (2) Students want more than to be processed on an assembly line of knowledge, rated and stamped with a mark of quality at the end of a semester: they want interaction - personal interaction.

## II. STUDENT PROFILE

Today's college students are no longer an elite minority attending a limited number of higher education institutions, as over half of our nation's youth from the ages of eighteen to twenty-one are in college; and over half of these many thousands are attending two-year colleges. The open door policy has seduced not only the academically successful student but the high-risk student. However, many students find they lack scholastic basics to survive in college; they are on shifting sand as they struggle to reach more theoretical levels. At El Camino College, the fifth largest single-campus community college in the world with a campus population of over 23,000, a recent study revealed that the average reading level of El Camino students is tenth grade. Yet these students are enrolled in academic courses that command college-level reading.

These students are not the stereotyped young "goof-offs" who don't know what they want. Certainly some do drift aimlessly, so preoccupied with the sun, the sand, and the surf, at least in California, that their education competencies remain latent. But this group is in the minority at El Camino and similarly at other colleges. Many of our students are veterans, housewives, the unemployed, the soon-to-be enemployed and even the retired. They attend college because they have specific educational objectives and goals.

## III. INSTRUCTOR PROFILE

The plight of the college instructors cannot be ignored either. In assuming the academic responsibility - and now facing accountability - for approximately 150 students a week and serving on numerous academic committees, we often sense our progenitor was not Adam but Sisyphus. We too suffer from this Age of Disposability in which the average college instructor no longer teaches in a relatively small dormitory college with its micro-college relationship, affording out-of-class and even post-class contacts; instead, most of us experience a commutor macro-college atmosphere in which we seldom see our students from one class meeting to the next; and once our disposable students complete our courses, we rarely encounter them again. Also, we find ourselves forced into plugging as much information as the clock will allow into as many students as the classroom will hold. Unfortunately for both the academically successful student and the high-risk student, college instructors are no longer true mentors.

## IV. LEARNING CENTERS: SOFTWARE, HARDWARE, AND HUMANWARE

One opportunity for the student and instructor to combat campus impersonality is the learning center, a place that offers immediate drop-in, individualized service, featuring software, hardware, and most important, humanware - a place for personal interaction.

The software and hardware at El Camino's Learning Center are typical of that found in most learning centers. In conjunction with our systems approach, we offer such diagnostic service as the Purdue, Davis Reading Test, Nelson Denny, Jastak, and Detroit as well as diagnostic tests in English usage and spelling, and vision screening with the telebinocular. Our programs include note-taking, reading, vocabulary, spelling, memory span, listening skills, time management, Individualized English, test-taking skills, and many others, utilizing books, programmed materials, cassette tapes, flimstrips, records, and the Craig Reader.

The El Camino Learning Center is more than a place to which a student comes to check out materials and equipment, however. The emphasis is on personal contact with the student. When a student comes to the Learning Center, he has a full staff of dedicated people to assist him: the Learning Center director, student technicians, student tutors, counselors, a cultural facilitator, a secretary, and college instructors. With the assistance of this professional and paraprofessional staff, the student analyzes his problems and determines his depth and pace of study.

Our Learning Center director is a regular humanities division faculty member with two-fifths released time to manage the operation of the center and attend to the budget. However, it is not uncommon to see him testing the vision of a student or directing him in the use of one of the programs. The director's prime function while in the center is diagnosis and prescription. He is usually the person to whom certain students are referred. He may check the student's vision or sit down and talk for awhile to determine which course of action is best. He then generally turns the student over to another instructor or to a student technician or tutor for diagnostic tests or individual work. Another director's function is to act in an academic ombudsman capacity. Students are referred to him by instructors, counselors, student peers, and various student services on campus. Our center works in conjunction with the Vocational Education Act, Project Open Door, and Financial Aids to provide special individual work and classes. Our center also has established some channels for referring students whom we are not equipped to help. We have recently made contact with physical and speech therapists to whom we can refer students.

To provide assistance to the director and instructors in the center and to take care of part of the follow-up after a student has chosen his Learning Center activities, a small staff of student technicians is available. These students are hired and trained to direct students in finding and using Learning Center materials. These student technicians are responsible for much of the success of the center because they provide peer encouragement and help. Students who come into the center are not intimidated as they might be if confronted by a totally professional staff; rather they are relaxed and earnest as they seek help from their peers who perhaps only a semester ago took the same class that now troubles the students. Student technicians must, of course, be familiar with the center and somewhat well-versed in the kinds of skills they will be trying to encourage in others. They need not be specialists or experts; they do need to be somewhat successful students. It has been our experience that students who have recently completed or are in the process of completing basic freshman and sophomore courses are well-qualified learning center assistants. Several of our student technicians first found themselves in the center because they were students in classes that utilized the center.

The Learning Center is also a meeting place for students and student tutors. Tutors, made possible by the federally funded VEA and EOP, find the center a comfortable and convenient place to meet with students.

We have learned that students who require advice from a college counselor are hesitant to do so. They are discouraged by the gap in time between making the appointment and the actual conference. By bringing a counselor to the Learning Center, we find that students feel free to drop in and discuss their academic and personal concerns. One of the regular college counselors spends two of his contact hours a week in the lounge part of the center. He is identified not by the austere name plate on his office door but by a large orange poster with a bold arrow pointing to an old armchair in one corner of the Center. Counselor and student get acquainted casually, usually over a cup of coffee.

Our newest addition to the Learning Center staff is a cultural facilitator, hired by the college to serve students who for ethnic reasons have difficulty in the college environment. His responsibilities are practically infinite. He may need to walk with a student to the Administration Building to help him locate the Financial Aids Office. He may need to be a liaison between student and instructor. He may become involved in trying to help a student through a legal problem off campus. Our cultural facilitator happens to be bi-lingual; he devotes part of his time to a new communications clinic for Spanish-speaking students on campus. Instead of sitting behind a desk in some building, he makes himself easily available each morning in the Learning Center. Students drop in and talk to him as they do with any one of us in the center.

The uniqueness of El Camino's Learning Center is the volunteer instructor services. The plan is simple: with the full approval and cooperation of the administration, instructors donate some or all of their office hours to the Learning Center, conferring with their own students as well as other students. Although the majority of the instructors are from the Humanities Division, instructors from other divisions are now involved in the program. Last semester El

Camino instructors donated a total of forty-eight hours per week.

The individual instructor determines not only the amount of time he will spend in the Learning Center but his role: some instructors are available to assist students in a particular subject area while others prefer to become involved on a wider scope that includes student orientation, testing, diagnoses, and follow-up. A typical scene in the center depicts a math instructor tutoring a student who is failing algebra, an English instructor testing a new client in probable problem areas, and a speech instructor conferring with one of her own students.

The instructors become involved in the Learning Center rather than in their offices because of a more relaxed atmosphere and the availability of supplemental or remedial programs. Also, instructors re-evaluate their own teaching methods while assisting other instructors' students - sometimes they learn how not to teach, asking themselves, "Do I do that?" In addition, working on a one-to-one basis, the instructors gain a better understanding of students' learning problems and their processes of thinking: invaluable insights that transfer to classroom teaching.

Being involved in the Learning Center, the instructors often find a way to break away from 2 x 4 education--away from the confines of the four walls of a classroom and the two covers of a textbook. They have the place and the equipment for innovation: for example, since a major classroom problem is the limitation of time for reinforcement, instructors can place supplemental and remedial programs in the Learning Center or even have their students individually plugged into the Learning Center as part of their assignment - we must admit to ourselves that allotted class time necessarily limits subject coverage in scope and depth. At the beginning of a semester some of the English instructors give an English usage diagnostic test from which their students formulate a student profile sheet that enables the students to work in an individualized English usage program in the center on their own time. Vocabulary and spelling programs are often tied into the class syllabus in this manner. Instructors can tape key lectures on tape or videotape if they plan to be absent, if students need more than one exposure to a lecture, or if they need supplemental lectures. Instructors are limited only by their imagination.

Also, small classes use the Learning Center as a classroom. The VEA-POD Study Skills class is set up on an individualized program in the center, with students working on their individually prescribed programs while the instructor circulates among the students in short conferences. It is also possible for an instructor to have part of a class working on individual programs certain days of the week while the rest of the class is involved in an enrichment activity in the regular classroom.

The volunteer instructors find the Learning Center a place for personal interaction, a place where they can become involved in the Pygmalion process: striving to mold students toward a state of self-reliance and self-confidence. When a student has reached the comparable state of enunciating clearly "The rain in Spain is mainly on the plain," then we can exclaim, "My God! He's got it - he's got it!"

If colleges continue the open door policy and token tuition, we as educators have a moral obligation to make every effort to provide for the needs of students who are self-motivated enough to seek help outside the classroom. As a colleague remarked recently, "Nearly anyone can theorize, but a professional acts, exhibiting more viscera than vision, more performance than promises." (3)

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1. Alvin Toffler. Future Shock, Bantam Books, 1970.
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# THE INTERMIX TECHNIQUE FOR DEVELOPING STUDY SKILLS

**Dave Capuzzi**
Our Lady of the Lake College

## INTRODUCTION AND PURPOSE

The use of groups to facilitate both self-understanding and improved interpersonal relationships is a sweeping social movement which has had effects on education, social work, business and industry, psychology and medicine. Groups labeled as sensitivity, encounter, process, training human relations, or counseling have achieved a prominent, almost faddish, position in our society (Diedrich and Dye, 1, p. 65). Few people are neutral in their opinions of the use of groups (Wrenn, 3). It may be significant that those who praise the use of groups are those who have experienced group membership under expert and sensitive leadership while critics are those who have had bad experiences in a group often because of poor leadership (Wrenn, 3) or utilization of an approach inappropriate for the setting or group members.

The purpose of this presentation is to describe and to demonstrate the use of the intermix technique which can be used appropriately when working with groups of twenty or more individuals in an educational setting. Since this approach can be applied to areas other than the reading and study skills area, variations of the use and application of the intermix will be discussed at the end of the presentation.

## BACKGROUND

From a historical perspective, work with groups has been utilized successfully in the field of social work for many years. The use of the group approach became more research-oriented, analytical, and specific as the result of the contributions of Kurt Lewin, who stimulated much thought and research in the area of group dynamics or group process. After World War II, the practice of group psychotherapy came into widespread use in hospitals and other clinic and agency settings. The N.T.L. Institute, which conducts group programs at Bethel, Maine, and at regional training labs throughout the country, has made "sensitivity training" a household word.

Esalen, lacated in Big Sur, California, has become famous for its Gestalt therapy and sometimes rather "far-out" encounter groups. Finally, the group counseling movement has emerged in schools and colleges (Wrenn, 3).

The intermix technique for working with groups of twenty or more students was developed at Florida State University during the 1970-71 academic year. Dr. Don Rapp of the Institute of Human Development was the creator of the approach and experimented along with the writer with numerous variations and applications. The writer did much of the original experimentation and development of the intermix in the Reading Services (college study and reading skills center) at Florida State University and has conducted intermixes with groups as small as 20 and as large as 255, from fifth grade to graduate levels in public school and university settings in Florida, Georgia, Louisiana and Texas. One of the principal reasons for developing the intermix was because of dissatisfaction with the traditional lecture method of college teaching which so often leads to lack of student-to-student involvement and lack of enjoyment of the learning process.

## ASSUMPTIONS

The following assumptions concerning college classroom learning will set the stage for understanding the dynamics of the intermix learning climate and the role of both student and instructor:

1. Students as teachers. Persons learn best when they are allowed some unique responsibility for teaching others and themselves (Ashton-Warner, 1963). Each group member must know he is uniquely needed by the entire group.
2. Simultaneousness. Every student is capable of simultaneous learning/teaching, thinking/feeling, reflecting/acting, remembering/doing, being self/empathizing, giving/taking, and enjoying/being serious. Man is not limited to the performing of one act at a time. The universe is not linear (Watts, 1966; McLuhan, 1962).
3. Trust. Students can be trusted to do what is right for them in their own learning process (Postman, 1969; Rogers, 1969). They must be allowed full responsibility within the limits of the theme.
4. Growth is infectious. A group will be more likely to grow in many dimensions, (social, emotional, mental or academic) when the individual's growth is connected to the group's growth. Carnegie's (1936) group-oriented selling of enthusiasm has long been a popular method toward greater personal zest and awareness in the human relationships.
5. All Winners. Optimum learning disallows student-

instructor conflict over the "available" learning. Learning occurs best when teachers' and students' roles are blended, both being learners. Learning is never quantitatively limited. As far as man now knows, learning and the universe have no end. Both knowledge and capacity to learn are limitless.

6. Interdependence of learners. Groups of students that optimumly communicate among themselves in and out of class on many levels form an atmosphere that is highly conducive to academic content acquisition. Simply, people need people for their optimum growth.

7. Human sharing. Every student, regardless of personality and background, has positive qualities that can be helpful to some other classmate. The larger the group, the more likely these helpful sharing connections will be found and be made on a deeply meaningful basis for both sharer and receiver. (Rapp and Williams, 2, pp. 5-7).

The role of the teacher in Intermix is:

1. To facilitate the richness of the total classroom environment (see discussion on intrinsic and extrinsic primers).
2. To get out-of-the-way of students' learning.
3. To be perceived by students as a fellow learner.
4. To organize the group so as to promote later group self-organization.

## ORGANIZATION OF INTERMIX SESSIONS

The best setting for an intermix is in a room which has movable desks or folding chairs. After arranging the seating so that participants are seated in a circle which is large enough in diameter to allow for the number of participants involved to walk around as they are directed into various combinations (two's, four's, eight's, etc.), the following directions are given:

1. It is assumed that everyone is here to learn and would enjoy learning in as enjoyable a way as possible.
2. Your personal human learning potential is always greater than you make use of. Try to assimilate as much as you can during this intermix session.
3. Intermix encourages you to be helpful to one another and will not embarrass you or put you "on-the-spot" in any way.
4. Although you will feel yourself closely directed during intermix, you will also feel great latitude within this intermix session for individual growth and

learning.

5. Please listen for "may I have your attention please" and quiet down when you hear me. You will be directed through a series of interactions with other group members and will need to listen, periodically, for new directions.
6. There will be discussion time at the end of the intermix to allow you the opportunity to express any feeling you may have generated during the intermix session.
7. Please remember, during intermix you are responsible for your own learning as well as the learning of other group members.

Following this introduction, individuals are directed to walk across to the other side of the circle and find a partner they don't know or, if that isn't possible, a partner whom they don't know very well. After about three minutes, during which time partners introduce themselves and begin getting acquainted, the participants are instructed to walk to the opposit side of the circle and find another partner whom they don't know or don't know very well. After a total of three or four one-to-one intermixes, partners are instructed to stay together, find one other couple, and form a four-member "growth group" which they will return to periodically. Growth groups are given five or six minutes to get acquainted and are reminded to be sure to remember other growth group members as well as their physical location in the room. While growth groups are in the process of getting acquainted, each member of each growth group is given a "Concept Slip" containing one short excerpt from a learning package, kit, or workbook from the learning lab. Each participant is given a different concept slip. Here are two examples of the concept slips prepared for the study and reading skills intermix:

1. Editing a Theme. After you finish writing a theme, essay, or paper, it needs to be read, edited, and revised. This is the time to polish your writing, smooth out the rough spots, and correct any errors... When proofing and editing your first copy, follow these steps:

   1. Reread
   2. Review Sentence Structure
   3. Check Punctuation
   4. Check Antecedents of Pronouns
   5. Improve Nouns and Verbs
   6. Add Adjectives
   7. Use Appropriate Language

   For more information see Selections from the Black (purple book) edited by Spargo, Jamestown Publishers, 1970.

2. Taking Tests. Look over the entire test before you start to answer any questions. It is obviously impossible to know how fast to answer the questions if you are not aware of how many and what type of questions there are to answer. Only by looking over the entire test and getting an idea of its scope will you know how fast you must work through the items. The minutes you spend in surveying will help you make better use of time and therby improve your test performance.

   For more information see How to Take Tests by Millman & Pauk, McGraw-Hill, 1969.

After each participant has a concept slip (enclose each slip in an envelope if you don't want participants to read the slips prior to giving directions), instruct participants to spend two or three minutes silently reading and learning the materials written on the concept slips. Then, ask each growth group member to spend a minute or two teaching the other growth group members what he has just learned. This process is followed by a series of additional one-to-one intermixes during which partners share and trade information (instruct participants not to intermix with members of their own growth groups who already have heard the material). These intermixes are timed for about three minutes each; available time affects the total number of these one-to-one intermixes.

Finally, participants are asked to return to their respective growth groups and share their cumulative learning, but only the information they learned from others - not the concept slip information they have been conveying during the intermix. This growth group meeting lasts as long as it takes for members to share, and is followed by reassembling the total group for further discussion of concept slip content as well as reaction to the intermix experience itself.

## SOME VARIATIONS

The intermix approach to working with groups has numerous possibilities for variation and development. For example, once a group has experienced intermix, it may not be necessary to direct participants through the initial series of one-to-one intermixes. Growth groups could be formed at the beginning of the session and concept slips could be passed out. This would expose participants to an even greater number of ideas during the time available and leave extra time at the end for discussion and synthesis.

Another variation involves assigning a different reading task to each growth group a day or two prior to the next intermix. The intermix session can be initiated by asking growth group members to practice teaching each other the material they had been asked to read. Name tags or simply blank, colored tags made in advance can be given to each growth group (a different color for each group). Then, as soon as growth group meetings have taken place, a series of one-to-one intermixes can be conducted during which participants seek partners wearing different color tags to insure exposure to as many different reading assignments as possible.

The intermix can be utilized for review purposes by asking participants to review notes, texts, etc., ahead of time. At the beginning of the intermix, each participant is asked to list three to five concepts or ideas he recalls well enough to explain to others. One-to-one and growth group intermixes can be used to review and reinforce in such a manner.

It probably goes without saying that the intermix can be used as a vehicle for helping people learn in almost any content area. For example, verb forms or idiomatic expressions in foreign languages can be learned via intermix. Mathematical proofs and formulas, brief sketches of personality theory, eras of history, career development theory, etc., can be conveyed using intermix. In addition, intermix can be used to illustrate certain aspects of group behavior. For example, putting growth groups together to form groups of eight, sixteen, or thirty-two changes membership roles and drastically alters patterns of inter-personal interaction.

Finally, it should be noted that the intermix approach to working with groups can be used in the affective domain as well as the cognitive. In a counselor education course, for example, the facilitator could ask participants to share one aspect of "self" that they felt would have ar effect on their ability to function in their inter-personal relationships in the role of a counselor. Undergraduate teacher education majors could be asked to do the same thing in relation to their role as classroom teacher; elementary school children could share their thoughts on "what I want to do when I grow up," "what's wrong with this class and what's right with this class," etc.

## CONCLUSIONS

Although the intermix can never be used as a complete substitute or replacement for individualized instruction, "give-and-take" lecture and discussion, etc., it can be useful adjunct to almost any teaching-learning style. Research which is in process at Florida State University will provide information on the results of teaching cognitive concepts via intermix as compared to other teaching methods (Rapp and Williams, 2). With young people across the country demanding more personal involvement and control over their own learning environments and with the demand for "accountability" resulting in the death of the ivory tower concept of the university, educators must be receptive to such new approaches to learning.

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# REINFORCED STUDY

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It is imperative for college enrollees to develop effective study techniques if they are to survive as students. Many methods have been recommended by teachers and tutors alike, but too few of these are based on acceptable learning theory which has come to us through educational and applied psychology.

Reinforced study is an attempt to utilize the wealth of psychological data in the construction of a study method that will prove effective in easy, high interest material, as well as with the very difficult subject matter. Assuming that the student is somewhat motivated to do the required reading, Reinforced Study should be of great value in accomplishing significant and lasting comprehension and retention of his material.

In order for a method of study to be effective, it should have identifiable elements which are definable and effective in accomplishing the purpose for which it is contructed. Such is the case with Reinforced Study. The steps which comprise the method are as follows:

1. Survey
2. Read
3. Outline
4. Skim read
5. Repeat steps 1, 2, 3, and 4
6. Rest

Step One, Survey. To survey is to take a special shortcut to overviewing the material. For example, one should read the title of the chapter or article. This provides a concise indication of the content. The second step is to read the entire first paragraph which introduces the chapter or article and gives an indication of what the reader can expect. The third step is to read all major subdivisions and other items which are emphasized by heavy type, italicized type, charts or maps. The fourth step is to read the last paragraph which usually provides the summary to the selection.

Step Two, Read. Increased effectiveness in reading can be expected when one approaches the task with the intention to learn and with a method of giving meaning to the printed page. The reader has to form only one question and constantly seek its answer to effectively accomplish both of these objectives. The question is "What is the author saying to me?" This question serves as a vehicle by which the reader remains tuned in on the ideas in print.

It is also helpful for the reader to note the most salient points of a selection by marking them as he reads. The method of marking should not be cumbersome or laborious. It could take the form of placing check marks in the margin beside each salient point, or one may use a perpendicular line in the margin to indicate each significant point.

While using Reinforced Study, one should never attempt to read when fatigued. This only leads to greater fatigue and decreased comprehension and retention. Therefore, when a reader reaches the point of mild fatigue, he should shift activities. The reader should, however, be aware of the natural breaks in the selection, such as topics and subtopics, and should stop reading only when he has reached one of these natural breaks.

Step Three, Outline. One should never read longer than thirty minutes before outlining his material. However, if one feels fatigued or feels a weakened concentration after having read for only five or ten minutes, he should shift from reading to outlining. A minimum of 25 to 30 percent of the study time should be spent outlining the material if Reinforced Study is to be effective. The greatest effectiveness of this method can be expected when one spends between 25 to 50 percent of his study time outlining his material.

Reading, coupled with outlining, is, for the following reasons, far more effective than mere reading.

1. There is improved motivation when a student reads with the knowledge that he must soon outline what he is reading.
2. It allows for immediate feedback, thereby giving an immediate indication of progress.
3. It encourages continuous concentration.
4. It allows one to involve the sense of touch in the study process, which is very important when we consider the evidence that supports the theory that the more senses one involves in the learning process, the greater will be the learning.

Experience has taught that the major precaution which must be taken here is that of making it very clear that students are not to read and record at the same time. Students must understand that the purpose of recording is to test their comprehension.

Step Four, Skim Read. The student returns to the text, which he has outlined, and skim reads the material out of which he built his outline to clarify points which are not clearly fixed in his mind. Skimming also affords an opportunity for the reader to reinforce his learning through this quick review.

To skim read the material, one should read the first and last sentences of each paragraph throughout that part of the selection which has been outlined.

Step Five, Repeat steps 1, 2, 3, and 4. A student should repeat steps one, two, three, and four as he proceeds toward the completion of this study task until he begins to feel fatigued or until his sense of concentration seems weakened. At such time he should advance to step six.

Step Six, Rest. This step should and must be viewed as commensurate with either of the preceding steps. It takes on increased significance when it is remembered that boredom is one of the greatest hindrances to effective study. Step Six goes a long way toward eliminating boredom as a factor in Reinforced Study. Thus when a student feels he has reached a point of boredom, he should rest.

Experience has shown that students work much more effectively when they get up from their seated position and move about during this rest period. This movement provides the release from tension which is so vital to the continued effective mental exercise of studying. This rest period not only reduces fatigue as a hindrance to effective study, but it also results in a progressively lengthened study span.

It should be remembered that students are usually so accustomed to sitting in one place throughout a class period, regardless of the level of fatigue, that they will probably view step Six with disbelief when it is first introduced. Therefore, it might prove helpful to remind them of the importance you, the teacher, attach to step Six with a comment such as "I consider Step Six in this method equal in importance to any of the others. I have enough confidence in each of you to believe you will not abuse the step. Therefore, I want you to feel completely free to leave the room for four or five minutes if you feel it will add to the effectiveness of your studying."

Cautions. Several precautions should be taken to insure the greatest effectiveness from the use of this method.

1. Do not read and record at the same time.
2. Remember that recording is an imperative step in Reforced Study and that merely reflecting on the mater-

ial read will not produce the same degree of results.

3. Do not forget the question which keeps your purpose constantly before you - What is the author saying to me?
4. Always skim read after outlining.
5. Do not record more than is necessary to insure your comprehension of any point.
6. Always read to a natural break before outlining.

Specific Advantages. The specific advantages of Reinforced Study are as follows:

1. It reduces fatigue as a hindrance to effective study.
2. It leads to improved motivation.
3. It contributes to effective memory.
4. It allows for immediate feedback, thereby, giving an immediate indication of progress.
5. It encourages continuous concentration.
6. It results in effective comprehension.
7. It leads to increased retention.
8. It results in progressively lengthened study span.
9. It permits students to study at their own success rate.

Justification and Advantages. Reinforced Study offers advantages which are educationally and psychologically sound. Below is a statement of general priciples of psychology on which Reinforced Study rests:

1. Behavior that is reinforced tends to recur, and learning that is reinforced comes more easily and is more permanent.
2. Reward is more effective when it closely follows the desired behavior of learning.
3. Learning that brings intrinsic rewards is preferable to learning that is rewarded extrinsically.
4. Rewards should not be so dominant in the learning situation that the students strive primarily for their attainment rather than for the attainment of educational goals.

Conclusion. The most important question to ask about any method of study is DOES IT WORK? If the answer is no, the method should be carefully examined, and if modifications prove ineffective, the method should be discarded completely. However, if the answer is yes, we are all better off for its development.

# THE RELATIONSHIP OF STUDY SKILLS AND ATTITUDES, LIBRARY SKILLS, AND READING SKILLS TO ACADEMIC SUCCESS

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The major task in high school and college education is to help students develop the skills appropriate to the age in which they live. The large amount of information and ideas supplied by mass communication of this era make the selection of these sources difficult. (18:7) In this explosive age the very heart of the process of education is learning to read. (18:62) It is generally accepted that with other factors equal, the student adept in the mastery of textbook information and proficient in vocabulary, reading and study skills, has an academic advantage over the student deficient in these areas. (20:12) Anderson, Conant, Cowley and Eckert agreed with Douglas' proposal of qualifications for academic success in today's university and developed this concrete list:

1. relatively large and precise vocabulary
2. skill in the use of many books, periodicals and the use of the library in general
3. ability to express one's self fluently and precisely in oral and written language
4. study habits and skills, particularly those centering around problem solving, rapid reading, careful reading and note taking
5. a high degree of computational ability in arithmetic and simpler aspects of algebra
6. the development, presentation and expansion of strong and stable interests. (21:13)

In summarizing the literature on college reading research and reading program surveys the following main points seem to emerge:

1. There is general agreement that the command of reading skills, vocabulary, and study skills is important in the achievement of college academic success.

2. College students aware of their reading deficiencies are strongly motivated to seek help if it is available.
3. There is research evidence of a relationship between college reading and college grades.
4. There is a wide gap between reading theory and reading training in college clinics, and there is no one pattern of training adhered to in the clinics.
5. There is little attempt to individualize reading training on this level.
6. The Nelson-Denny Reading Test, commonly used in clinics, needs to be incorporated in predictive batteries to establish more data concerning its value for prediction.
7. The Library Orientation Test, although not widely used, is probably superior to informal library skills testing, but needs to be tested as a predictive instrument in relationship to achievement.
8. The Brown-Holtzman Study Habits and Attitudes inventory on study has been used more extensively in research designs than the other two tests and found to be a significant predictor of grade point average.
9. Studies made of the effects of college reading training show measureable improvement of skills and indications of improved grade-point averages in some cases.

One of the areas needing further exploration is the area of diagnostic measures of college reading skills that could lead to planning an efficient and appropriate remedial program tailored for correction of these deficiencies. This paper presents the results of a study in the area of diagnosis of college reading achievement and their predictive value for college success.

## STATEMENT OF THE PROBLEM

The problem for this study was: What is the relationship of study skills and attitudes, reading skills, library skills, educational specialization, sex and class membership to the academic standing achieved by education students at the University of Portland during the fall semester of 1968?

## METHOD USED

Fifty-seven students in the three classes of Social Foundations in Education were tested for this study. The tests administered to them were the Brown-Holtzman Study Habits and Attitudes, the Nelson-Denny Reading Test, and the Library Orientation Test. The criterion was the GPA achieved at the end of the fall semester of 1968, when the students were tested. The design was multiple regression analysis. The variables used were:

| | |
|---|---|
| $X_1$ | reading vocabulary |
| $X_2$ | reading comprehension |
| $X_3$ | study habits and attitudes |
| $X_4$ | library skills |
| $X_5$ | education specialization of secondary or elementary teaching |
| $X_6$ | sex |
| $X_7$ | class membership |

## FINDINGS

The results on the correlation tables showed that five variables were significant to the .05 level with fifty-six degrees of freedom with a correlation greater than .261 or lesser than -.261. These five variables correlating with the criterion in the order of importance were study habits and attitudes, library skills, vocabulary, class membership and reading comprehension. Education specialization and sex showed an insignificant correlation. The study of intercorrelations showed vocabulary highly correlated with SSHA, library skills, and class. All of these were correlated with GPA and suggest that their common factors of intelligence and verbal skill may have been operative. Comprehension correlated as might have been expected with vocabulary and library skills which would require a command of vocabulary. Study habits and attitudes, an inventory, correlated significantly with library skills. These were the two highest predictors of grade-point and both might be considered study skills. Library skills had a significant correlation with vocabulary, comprehension, and SSHA. Education specialization indicated a relationship with the non-verbal variables of sex and class. An explanation might be that most men choose the secondary teaching level. Sex was correlated with education specialization and vocabulary and seemed to be a suppressant operating with vocabulary. The disproportion of males and females who are supposedly superior in verbal skills may be a factor. Class correlates with education teaching level and vocabulary. Possibly, vocabulary could be expected to improve with student maturity.

The least squares method was used to obtain the values of the four variables used in the multiple regression equation. They were $X_1$ vocabulary, $X_3$ study skills, $X_4$ library skills and $X_7$ year in school.

The values were:

$a_1 = -.00074 \quad a_3 = .02634 \quad a_4 = .02735 \quad a_7 = .10684$

The value of C was .4612. The multiple regression equation was:

$$Y = -.00074X_1 + .02634X_3 + .02735X_4 + .10684X_7 + .4612$$

## TABLE 1

## MATRIX OF ZERO-ORDER INTERCORRELATION COEFFICIENTS

| | Vocabulary $X_1$ | Comprehension $X_2$ | SSHA $X_3$ | Library $X_4$ | Education Specialty $X_5$ | Sex $X_6$ | Class $X_7$ | GPA Y |
|---|---|---|---|---|---|---|---|---|
| $X_1$ | 1.0000 | .5920*** | .4788*** | .4763*** | .2526 | .0588 | .3631** | .4304*** |
| $X_2$ | .5920*** | 1.0000 | .1577 | .2654* | .2036 | .2111 | .2341 | .2702* |
| $X_3$ | .4788*** | .1577 | 1.0000 | .3975** | .1862 | -.0237 | .2598 | .6390*** |
| $X_4$ | .4763*** | .2654* | .3976** | 1.0000 | .1679 | -.1663 | .1710 | .5306*** |
| $X_5$ | .2526 | .2036 | .1862 | .1679 | 1.0000 | .4133** | .6034*** | .2068 |
| $X_6$ | .05875 | .2111 | -.0236 | -.1663 | .4133** | 1.0000 | .1443 | -.0995 |
| $X_7$ | .3631** | .2341 | .2598 | .1710 | .6034*** | .1443 | 1.000 | .3572** |
| Y | .4304*** | .2702* | .6390*** | .5306*** | .2068 | -.0995 | .3572** | 1.0000 |

N = 57

r( .05, 55d.f.) = .262*
r( .01, 55d.f.) = .339**
r( .001, 55d.f.) = .426***

## TABLE 2

## ANALYSIS OF MULTIPLE REGRESSION

| Source of Variation | Degrees of Freedom | Sum of Squares | Mean Square |
|---|---|---|---|
| Regression | 4 | 12.87936 | 3.21984 |
| Residuals | 52 | 11.49314 | .22102 |
| TOTAL | 56 | 24.37250 | |

$$F_{(1,3,4,7)} = \frac{\text{mean square regression}}{\text{mean square residuals}} = \frac{3.21984}{.22102} = 14.5680$$

Significant beyond the 1 per cent level (9:240)

$$R_{y(1,3,4,7)} = \sqrt{\frac{\text{sum of squares regression}}{\text{total sum of squares}}} = \sqrt{\frac{12.87930}{24.37250}} = .727$$

Significant beyond the 1 per cent level (9:240)

$$O_y = \sqrt{\text{residual mean square}} = \sqrt{.22102} = .46034 \quad (9{:}240\text{-}1)$$

## TABLE 3
## TABLE OF REGRESSION WEIGHTS

| Vocabulary $A_1$ | Study Skills $A_3$ | Library Skills $A_4$ | Year in School $A_7$ |
|---|---|---|---|
| $A_1 = -.00074$ | $A_3 = .02634$ | $A_4 = .02735$ | $A_7 = .10684$ |
|  | $C = .4612$ |  |  |

The F of 14.568 with four and fifty-two degrees of freedom was significant beyond the 1 per cent level. Therefore, the null hypothesis that GPA cannot be predicted was rejected.

The R of .727 was significant beyond the 1 per cent level. The R corrected for bias was .708.

The corrected standard error of the estimate was .4717. The standard error of R was .057.

## CONCLUSIONS

The null hypothesis that GPA cannot be predicted by vocabulary, study skills and attitudes, library skills and year in school was rejected and the alternative hypothesis accepted. However, since comprehension had a significant correlation with GPA at the 5 per cent level, further research might include this variable. Comprehension was also acting as a suppressant with vocabulary, and the test used to measure comprehension may not be a good one. Because of the disproportion of males to females in this study, future designs should include the variable of sex. It is possible that men and women choosing education have the same type of abilities.

The size of the sample was small because it was limited to education students in Social Foundations of Education classes and thus did not provide a group check. Since vocabulary, SSHA, and library skills were correlated with the criterion as well as among themselves, verbal skill is probably a common factor in all three measures. Study habits and library skills were significantly correlated as well as being the two highest contributors to the regression variance and this indicates that library usage may be considered a valuable skill if one is to succeed in the freshman year. Teaching level showed a relationship with the non-verbal variables of sex and class membership. Most men choose the secondary teaching level. Sex seems to be operating as a suppressant with vocabulary. Class correlating with education specialty and vocabulary suggests that vocabulary could be expected to improve with student maturity.

## SUGGESTIONS FOR FURTHER RESEARCH

Further research should be designed with an N of at least 200 from the general freshman population. One half of the group is to be used as a check for the prediction equation. Such a design could include the high school honor points earned for English as it has been found to be a significant predictor. If valid tests can be located, the dependent variables could be expanded to include listening and writing skills. One of the main purposes of such a study is to discover the skill deficiencies that could be remediated to achieve an improvement in academic success.

Using the findings of this study, a reading program could be effected using college texts as a basis for vocabulary and study skills development. Practical exercises in library use should be included in such classes. The multiple regression equation can be used as developed in this study to select students who, without some help, would probably fail. The control group could be a matched group with no special training. This group could be used for checking the results and doing a simple chi square. The second semester work would be with those most likely to fail according to the equation. At the end of the semester, the predicted could be matched with the observed scores which should be higher. If this is successful, work could be done with interested professors to develop methods of study appropriate to their courses that would be helpful for the students enrolled in the courses.

Other uses of these findings could be to review the current tutorial program offered at the University of Portland. On the basis of findings, high schools need to ascertain their efforts to develop vocabulary, study skills and attitudes, and library skills; then to develop a stronger training in those areas. The implications for teacher training are to prepare future teachers in sound methods of developing vocabulary, study habits and library skills throughout the grades.

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# EVALUATION: TOWARD RESPONSIBLE ACCOUNTABILITY

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The word accountability is increasingly in the campus air, hanging particularly heavy over the heads of those student services concerned with learning problems and techniques. At UCLA, Vice-Chancellor Norman Miller, responsible for a wide range of services in his Office of Student and Campus Affairs, undertook to meet the intensified demand for measurable accountability through preliminary internal evaluation. A committee of staff members from various services selected a model, an animal to be conditioned (The Learning Skills Center), and designed a testing procedure.

## MODEL SELECTED

An existing model, developed principally by Marvin Alkin, Gary Fenstermacher, Stephen Klein, Allen Rosenstein and Rodney Skager in the Center for the Study of Evaluation (CSE) at UCLA was selected for this study. Identified as "The Center's Changing Evaluation Model," it fulfills one of the major purposes of CSE, namely to develop and improve evaluation "theory." Flexible and amenable to change, the model was originally designed to evaluate public school classroom teaching. To my knowledge, this is the first attempt to adapt it to student services. For a clear understanding of what followed, a few definitions are essential, since they run counter to ordinary usage of these terms.

## DEFINITIONS

Evaluation is concerned primarily with educational effectiveness, a process normally internal to the organization.

Accountability is concerned with effectiveness and efficiency, a process connoting external judgment, with stress on efficiency oriented criteria.

Effectiveness is the degree to which an organization succeeds in whatever it is trying to do.

Efficiency is an organization's capacity to achieve results within a given expenditure of resources; it is concerned with the relationship between cost and benefit. Hartnett (2)

Accountability (in the junior college setting) accentuates results. It requires measurement techniques based on specifically defined objectives, and designed to determine accomplishment. And it adopts methods which guarantee that most students will attain the stated objectives. Roeche, Baker, and Brownwell (6)

Behavioral Accountability urges that effectiveness be judged by output relative to input, plus giving attention to efficiency. (What has a student attained relative to his capability at the starting point? And what did it cost?) Mortimer (4)

Evaluative Research Approach is distinct from basic research but contains many underlying concepts of behavioral accountability systems. Caro states that evaluative research facilitates change and the development of alternatives for the decision making process. Caro (1). Pace (5) prefers the evaluative approach because "Wise judgment demands an awareness of complexity and consequence, a consideration of values, and the need for information relevant to such complexities, consequences and values."

Educational Evaluation is the process of determining the kinds of decisions that have to be made and selecting, collecting, and interpreting the information needed in making these decisions. Five evaluation phases provide the framework for the decision making process: Needs Assessment, Program Planning, Implementation Evaluation and Progress Evaluation, and Outcome Evaluation. Klein, Fenstermacher, Alkin (3)

## DESCRIPTION OF LEARNING SKILLS CENTER

The Learning Skills Center (which includes a Learning Center, a Writing Center, and a Reading and Study Center) responds to individuals of the university community by supporting and encouraging them in all areas of learning. LSC's function is to deal with people who request aid in the development of the learning and thinking processes necessary to maximizing their educational experience in the university. The counselors emphasize concept grasping in all disciplines through study skills, reading, writing, speaking, and listening. A wide variety of programs is offered to help all students from probation status to 4.0 GPA, freshmen through graduate levels, including transfer, special entry, and foreign students.

We work with students on an individual basis and in groups. The groups are small to facilitate individualizing the programs and to comfortably fit into our space in the laboratories and offices.

Programs currently offered are:

1. Study Seminars
2. Writing Counseling
3. Mathematics and Science Counseling
4. Reading Seminars
5. Reading Groups, Reading Laboratory, and Open Laboratory
6. Reading Counsel by individual appointment
7. Study Approaches by individual appointment
8. Speech Awareness Groups
9. Professor and Class Visiting (particularly the first meeting of large survey courses.)
10. Professional and University Community Involvement

In the Reading and Study Center we have a counselor immediately available at all times for new students, and another counselor on duty who sees students by appointment.

The range of academic, professional, and personal experience among staff members is unusually wide. Of five full time and thirteen part-time staff, the areas of specialization include English literature, linguistics, criticism, editing, advertising, journalism, astronomy, history, political science, sociology, philosophy, psychology, social welfare, education, public relations, medical technology, archeology, anthropology, theater arts, business, communication, theology, comparative literature, folklore and teaching at all levels from nursery school to graduate school, including adult education.

Most of our students are self-referred; some are referred by instructors, academic advisors, counselors, or friends. Students receive no credit and no grades for work done at the centers. As part of the student services, we are a non-academic department, charging no fee, no records are kept, and attendance is entirely voluntary. Since the student may leave at any time he feels his needs have been met, we usually have no "captive audience" for post-testing. We try to begin working with the student to meet his immediately expressed needs as well as new needs as they emerge. We are non-judgmental, non-discriminatory and essentially "non-directive" even though most of our work is task oriented.

## STAFF ATTITUDES

The above description of the Learning Skills Center is perhaps already history and may never recur in quite the same manner. The impact of undergoing the pre-evaluation process was indeed substantial. At the outset, the morale of the entire staff was high. The LSC counselors had great trust in themselves and in each other; harmonious relationships were the norm. There was confidence that in eight years of working together, an operating procedure using the counselor mode, which recognized both cognitive and affective areas in student problems, had evolved a thoroughly effective operation.

The staff has constantly evaluated on-going group programs and work with individuals. It is true, much of the evaluation has been subjective and intuitive. Feedback was frequently received informally from students. In the present evaluation, we learned that subjective evalution or intuition could not be measured easily or used effectively to document successes. At this point, we welcomed the idea of evaluation to indicate the quality of our work - for ourselves and for other interested constituencies. We therefore restrained our negative feelings, after much articulation and ventilation of them, about the difficulty of identifying the results of the catalytic services we rendered.

We realized the proposed model for evaluation would require us to move from the more accepting, non-judgmental counselor mode toward an instructional mode complete with pre- and post-testing, measuring, and grading (in effect), and record keeping, which we had long rejected. We believed the non-judgmental aspect of our work to be a positive force and did not relish the idea of giving it up. We held firmly to the tenets that we would not deny services to any student and would not manipulate people without acknowledging it to them and to ourselves. We wanted the underlying philosophy and spirit of the Center to remain inviolate by our continuing to give first priority to meeting the needs of the students as they initially expressed them and as new needs emerged. We experienced and expressed frustration when we recognized that we were to be evaluated by a pedagogical model which probably could not give us the pertinent information we wanted. For example, what were the needs of the students who did not come for our service? (We see 6% of the university population). Did those students "out there" have needs we could meet if we were aware of them? Did they have no need for our service? If they had a need, why did they not come? Much of our time, physical and psychic energy would have to be invested in the evaluation process; therefore, some depression followed our realization the evaluation process might not provide meaningful information we could use in a broader context.

## RESOLUTION

Undaunted by our doubt, frustration, and depression, we began the evaluation process in the latter part of the winter quarter and during the spring break. In full staff meetings, in small committee meetings, and informally where two or more of us were gathered together, we tackled the first step of the Retrospective Evaluation: needs assessment. We brainstormed 150 "initial" or "presenting needs" as stated by students in the past. We defined them and categorized them. That is a simple sentence stating what we did, but I wish we had taped some of those sessions for you to hear. Strong emotions were felt and expressed; best team-mates were at each other's throats - verbally of course. We were angry collectively, individually, and in every conceivable pairing, until finally, when tension was too great, we stopped and laughed at ourselves. Our sense of humor gave us a better perspective and reduced the tension to an endurable level for those interminable hours of meetings. The "watershed" for reduced emotional responses appears to have been reached when we fully realized the emphasis was to be on testing the CSE model for its use in student service settings, and not on our performance.

## UNPLANNED BY-PRODUCTS

One happy by-product of this experience was a new appreciation for the range of problems we were responding to. Another fortunate result had been predicted by a study from Oklahoma State University. Two groups of boys in a summer camp situation who were behaving in an extremely negative manner were manipulated into cooperation when faced with a "common enemy" - in that case hunger. When the much needed food could not be procured until a truck was started, they united into one team and cooperatively solved the problem so all could eat. We found the same phenomenon within our staff and now function in much more unity. Our three component offices are working more cooperatively although physical separation of the centers still exists. We experienced a renewed sense of respect for the work each unit does. Within the Reading and Study Center, where the "Mini-Study" was conducted, there seems to be a new appreciation of the uniqueness of each person and the value of his contribution. There seems to be a "pulling together" to meet the common enemy: evaluation by external sources. This is perhaps because together we, from the inside, can, by cooperating with "them" fulfill both their needs and ours - and we can eat, perhaps better, if we are able to prove the efficiency and effectiveness of our functions deserve more funds.

## EVALUATION PROCESS

There are two aspects of the research design: Retrospective evaluation to test the CSE model's applicability to established programs, and the Mini-Study to test it's applicability to a newly developed program.

Objectives of the Retrospective Evaluation segment are:

1. to ascertain if the model "fits" a student service context. Discrepancies between the model and reality are to be noted and appropriate adjustments made in the model.

2. to a) note discrepancies between the model and its functioning in a real on-going environment, b) make adjustments in current programs where feasible, c) use the findings to apply to the Mini-Study, and d) construct and implement programs, methods, tools, and techniques for the coming year.
3. to evaluate results of the Retrospective evaluation for transferability to a university-wide context.

Objectives of the Mini-Study field test are:

1. to develop and implement a small program to use available Retrospective Study findings to aid continuity and development.
2. to apply results toward further reality-testing of the model.
3. to note contributions for the university-wide model.

RETROSPECTIVE EVALUATION: NEEDS ASSESSMENT COMMITTEE

To date this committee has categorized the 150 student needs and their definitions as follows:

I. Learning Skills - a) reading skills, b) study skills

II. Writing Skills - a) pre-writing, b) forms of writing, c) mechanics

III. Personal Problems - a) problems of transition (academic survival), b) emotional responses to learning demands, c) problems of responsibility, d) problems of relationships, e) problems of personality, f) problems induced by society.

Eighty-nine outcomes (behavioral objectives) stated in terms of students' performance were written. Examples of typical objectives are:

1. Students will become independent learners.
2. Students will be able to handle their reading loads with confidence and assurance.
3. Students will be less anxious about their performance in any course.

The committee prepared a three-page typed, single-spaced report, titled "Past Responses to Various Constituencies by the Learning Skills Center." It is so varied and long that it amazed the entire staff. A large scale assessment of needs of our potential population was too expensive. The plan at present is to send a questionnaire to a representative, random sample of students, faculty, administrative staff and off-campus constituencies asking the recipients to rate on a scale of 1 to 5 (less or more important) 18 present objectives of the LSC and giving them the opportunity to list any objectives we may have ommitted. The sample number was set at 200, for financial reasons, and to ascertain the percentage and quality of the responses. The staff is concerned that the needs (objectives) listed and ranked in this form may not accurately reflect the wide needs we think exist and we suspect that if a student should come in in the future stating a need ranked low or not on the list we probably would respond to it as if it were number one on the list. (It would be number one for that student by our philosophy!) Staff resistance?

The next four phases of the retrospective study have not been carried out because the pressure of the beginning of the Spring Quarter and the Mini-Study phases took precedence. It was "business as usual" in all areas of the LSC and business was good. In the month of April, 1972, LSC saw 752 students in 1231 encounters - a new high. I, myself, saw 107 different students in 177 encounters. The length of encounters ranged from 15 minutes to 4-1/2 hours, and 79 of the encounters were in on-going groups which required individualized planning for two-hour sessions once or twice a week. Of course with voluntary attendance many plans were made for students who did not appear when expected. That is the nature of the situation except that those total figures are the largest for any month since I have been at UCLA. All this and evaluation too! There were a minimum of discreet advertisements in the Daily Bruin, which we normally run early in the quarter. The reason for increased traffic in spring, an historically slow quarter, is not yet apparent; secretly, I suspect Somebody up there is plotting against evaluation and/or the staff, because illnesses struck with more frequency than is the norm. Correlation anyone?

## MINI-STUDY:
## NEEDS ASSESSMENT AND PROGRAM PLANNING COMMITTEE REPORTS

The most significant issue which effected the design of the study and the choice of a small program for the mini-study was the degree of interference the program evaluation would have on the normal activity. The staff's insistence that little interference by the evaluation would be tolerated was translated by the Principal Researcher, appointed to work with LSC staff and the Vice-Chancellor's Evaluation Committee, as "resistance and anxiety" and he predicted it could be expected in nearly every student service context; therefore, it was decided "every effort should be made to avoid alterations and additions to the on-going process."

He also thought it would have minimal impact on the systems being measured, and have greater value for the ultimate student service model, if the tools and techniques used required minimal change. (Translation: The tools and techniques were already good?)

## SIGNIFICANCE OF THE ATTEMPT

I believe this attempt at evaluation for responsible accountability has been an experience for growth and self-renewal for the LSC staff. We are now aware of methods of evaluation, their benefits and pitfalls, which we had not consciously considered before. There seems to be a new creative attitude among the staff members toward improving old and inventing new programs, tools, and techniques. We have only begun the task which has required much time and energy. We try to hold the faith that the ultimate contribution will be worth the "price of the whistle."

Good research is said to result in new questions, and I suggest at least one that has occurred to me: Is evaluation efficient according to Hartnett's (2) definition? For those interested in efficiency-accountability-cost factors: to date the LSC staff has invested 600 man hours, at an average cost of $5.00 to $6.00 per hour, total being approximately $3000 to $3600. We are nearly half-way through a small scale attempt--a mere beginning if it is necessary that the cost-benefit correlation is on the plus side!

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# OTERO JUNIOR COLLEGE'S READING/STUDY SKILLS LABORATORY —A SUPPORTING SERVICE

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Otero Junior College, a rurally located Colorado community college serving approximately 900 students, operates under a liberal admissions policy. Needless to say, this state-prescribed "open door" policy, more often than not, swings both ways, frequently resulting in a high rate of student attrition. This waste of human resource seems unavoidable when a significant number of entering students not only lack proficiency in the basic reading/study skills, but come from culturally different, under-employed families as well. To assist the indentified "high risk" students from the Chicano, Black, and rural White populations of the area, the Reading/Study Skills Laboratory (DS 101) was set up under the Directed Studies Department (Flancher (5)). By being a part of a separate studies department, the skills lab avoids the "step-child" status common to those labs which are merely instructional extensions of academic departments (Kazmierski (12)).

Since reading/study skills is not a subject but a cluster of extremely complex skills which recognizes no departmental, academic, or subject-matter boundaries, the accountability of such a lab necessarily rests with the student, rather than with a particular discipline. Consequently, the overall purpose of our program is dual in nature. First, we strive in as short a time as possible to equip the individual with a degree of reading/study skill proficiency requisite to meet his present commitments. Second, we strive to increase his general reading ability by strengthening those skills whose deficit tends to inhibit full realization of potential. In short, our program, because of its criterion-reference character, is learning/learner oriented.

## ESSENTIAL ELEMENTS

The essential elements of our program are service, individualization, relevancy, and autonomy.

Basically, we are service-oriented, structured to meet the needs of the students, the faculty, and the community.

At times when an individual is experiencing severe difficulty in a specific area of reading/study skills, the lab takes on the semblance of a crisis clinic. By assisting the person through this immediate crisis, we not only help him improve his chances for meeting his obligations at the college, but help him regain his self-confidence as well.

Although DS 101 is primarily skill-oriented, its resources are also used to train student tutors. These students, in turn, provide tutorial service to individuals who are experiencing difficulties with the content/concept demands of the various disciplines on campus. They also help their compadres overcome the language barrier.

The intrinsic worth of the individual is respected through the use of individualized methods of instruction. Through individualization the importance of learner-participation in the formation and execution of effective learning activities is emphasized. The versatility achieved by determining behavioral objectives with each individual student and the use of a multimedia approach to satisfy these objectives greatly enhances the attitude of mutual respect. Needless to say, an approach in which the student and instructor play such active roles takes considerable time and effort; however, it is felt that the overall effect of such cooperation results in a more thorough commitment on the part of the learner. In general, the versatility that DS 101 has achieved through such individualization has lead to increased interest on the part of the student body (13, 16, 17).

An aspect of relevancy is acquired by demonstrating through the purposive integration of learning activities with the actual materials used in the special disciplines that the skills the client learns in the lab situation can be applied toward the consummation of his present commitments. By arming our students in this way, we maintain an aspect of relevancy crucial to the success of a learning assistance program (Christ (1)).

The voluntary nature of the program also contributes to its success. The risks inherent in this prescribed freedom are minimized by the on-going diagnosis and continuous counseling which each client receives virtually every laboratory session. If genuine learning is to ensue, the individual must freely and actively enter into the contract. This expression on autonomy is an immeasurable asset.

## STANDARDIZED TESTING INAPPROPRIATE

Corrective programs at the college level which rely on the indiscriminate use of standardized reading tests for all prospective clients tend to have several detrimental effects which can adversely influence remediation. Such procedures can cause culturally alienated students who have had a long history of faulure to become impatient and, at times, uninvolved in the program. These procedures can also intensify feelings of inferiority and alienation, thus perpetuating a crippling self-view.

It is also our understanding that the indiscriminate use of standardized instruments as a means of diagnosing or appraising the disabled reader is untenable (Durost (3)). What level test does one administer when the achievement level of the prospective clients can range anywhere from 4.0 to adult? (Goodwin (7)). The likelihood of a test designed for college or secondary use being appropriate for all is questionable. Hence, if grade placement is a poor indice of test level, what college could afford to purchase the barrage of test materials needed to satisfy its needs?

The following are some other pertinent questions raised when standardized instruments are used: Do reading tests measure skills or general knowledge? (Tuinman (25)). Does a standardized score of 10.2 made by Juanito and John signify comparable ability? Can one safely infer that a correct response or even pattern of correct responses is indicative of mastery? Or, does an incorrect response pattern indicate inadequate development? What part does test-sophistication, or the lack thereof, play in standardized test "results" and their interpretation? (18, 20, 26).

Apparently, then, our present standardized reading tests cannot adequately measure something as complex as the reading process. AT THE MOST, such instruments represent:

> "...one sampling of behavior, on one operational definition of that skill, under one specific set of conditions, at one particular point in a student's development..." (Farr (4) p. 52).

These tests measure the product rather than the process. In a service-approach laboratory designed to serve all students wishing to improve their reading/study skills, it is the process which is of prime importance. For this reason, standardized testing is inappropriate.

## A DIFFERENT WAY

Instead of administering standardized reading tests to those seeking assistance, we go a different way. We start with the reading/study skill deficiency as presented in the initial questionnaire and interview. In this way, we begin immediately to help the client remedy his skill deficiencies. While observing and teaching, the instructor learns, firsthand, about the client's approach to reading - the skills apparently mastered and those in which remediation seems necessary. In this manner, diagnosis and instruction have a reciprocal relationship. This combining of diagnosis with instruction eliminates the gap between the obtaining of information and the using of it (Strang (23) p. 7-8). Through this on-going diagnosis-prescription-evaluation, the reading process can be effectively monitored and appropriate instruction initiated.

Each staff member must, through the questionnaire and interview, appraise the nature and extent of the reading/study skill deficiency as well as acquaint the client with the purpose and scope of the program. Understandably, then, the Reading/Study Skills Lab relies heavily upon the instructor-diagnostician variable. For this reason, only individuals trained in the diagnosis and remediation of reading/study skills difficulties are recruited.

We feel the skills instructor who deals with the "new student" (Goodrich (6)) should, also, possess a cultural empathy, if not an identity with his clients. A genuine simpatia is an essential quality. Too many corrective programs are staffed with academicians who view the so-called minority cultures as nothing more than pathological phenomena. To us, the effective skills instructor is a subversive (15, 19). He is an advocate of the principle that teaching causes learning. If no learning occurs, no teaching has taken place (Roueche and Herrscher (21) p. 24).

## EVALUATION

During the Summer thru Spring Quarters of the 1970-71 academic year, the Reading/Study Skills Laboratory was appraised from several different aspects. It was evaluated from the aspects of its institutional impact, client reaction, and economic efficiency.

Institutional Impact. DS 101's total enrollment for the academic year under consideration was 530. These figures are shown in Table 1.

Table 1.

| Summer | Fall | Winter | Spring |
|---|---|---|---|
| 77 | 175 | 147 | 131 |

The figures need some clarification. First, the enrollment shown reflects the number of persons served without respect to institutional credits earned on the basis of full-time equivalency (FTE). A student may enroll for one, two, or three credits each quarter. In addition, since maturity in reading/study skills is a hypothetical construct which can only be approximated, students are able to re-enroll in DS 101 for additional help. Consequently, subsequent quarter enrollment figures in some cases include those persons who returned for additional help in one or more areas of reading/study skill development. This kind of "recidivism" is a definite strength of a skill-oriented lab and should be kept in mind while interpreting enrollment data.

Enrollment figures omit individuals who came to the lab for assistance, yet did not enroll officially for credit. Many of these students came for help in the areas of effective listening, note-taking, test-sophistication and the like. After receiving this assistance, they simply terminated future participation.

Availability was another way institutional impact was appraised. The extent in hours per week which the facilities and instructors are available is a definite asset to a community junior college which serves both full and part-time students. These figures are shown in Table 2.

Table 2.

Availability: Man-Hours Per Week

| Summer | Fall | Winter | Spring |
|---|---|---|---|
| 30 | 52 | 52 | 48 |

One important indication of institutional impact is the steady decline of students in academic difficulty. Prior to the development of the Directed Studies Department of which the Reading/Study Skills Laboratory is an integral part, the average yearly percentage of students in academic difficulty was 39.5%. At the conclusion of the Spring Quarter 1971, two years after the establishment of the D. S. Department, the percentage of students in academic difficulty was 13.0%. Although it would be difficult to ascertain exactly what contribution DS 101 made to this trend, it is felt because of the very nature of the reading/study skills and from the feedback of those students involved, much of this decrease can be attributed to DS 101 and its service approach.

Clientele Reaction. In an effort to maintain the program's responsiveness to client needs, the students are asked to evaluate both the course and the instructor at the end of every quarter. Judging from the comments made by the 493 clients responding, DS 101 met the needs and behavioral objectives of those enrolled.

Economic Efficiency. Judging from the number of persons served, the extent of availability and the low attrition rate, 6.7%, the Reading/Study Skills Lab is efficient. Much of its frugality is a direct result of the individualized, prescriptive approach used. This individualization allows for a greater variety of materials to be purchased in limited quantities, thereby enabling a relatively inexpensive multi-media approach. The utilization of commercially available, nonconsumable skill development materials adds to the variety without overtaxing existing financial resources. The fact that the skills taught in DS 101 are used by our clients in the special disciplines throughout the college, only serves to underscore this efficiency.

## DISCUSSION

DS 101's service approach along with its individualized, prescriptive methods is instrumental in increasing Otero Junior College's responsiveness to an "open door" admissions policy and the problems inherent therein. Through the efforts of this supporting service, the culturally different, "high risk" students now have a chance to succeed. Their success testifies to the fact that the egalitarian principles under which a public community college functions are viable.

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# THE INDIVIDUAL CONFERENCE: A WINNING CARD

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When Putting All Our Cards on the Table is analogized to college reading programs, a pinochle rather than a standard playing deck is revealed. That is, the "deck" consists of mainly face cards, the faces of the individuals enrolled in these courses. Among them are the Richards, whose achievement in course work has been good and who wish to accomplish their study tasks in a shorter period of time; the Waynes, who have been encouraged to enroll because of poor grades; the Michelles, who have been away from intellectual environments for some time and seek the assurance that they can succeed in academic pursuits, and the Robertas, who admittedly dislike reading for reasons they may or may not be able to specify. The winning card or strategy in college reading instruction is that which recognizes these faces as individuals and organizes an instructional program for their divergent personalities, backgrounds, motivations, and interests.

The developmental reading course at Central State University is a two-hour elective, credit-bearing course in which these students enroll for credit or audit prior to their enrollment for credit. Enrollment is limited to twenty students to maximize personalized instruction and student-instructor interaction. The individual conference has been initiated in some sections to provide a time and a place where student counseling occurs and individualized objectives and readings can be discussed.

## AFFECT: AN IMPORTANT DIMENSION

Recently published articles indicate that college reading instructors must play their cards in such a way as to capitalize upon the affective as well as the cognitive needs of students (8). Maxwell (11) has stated:

> "Personality factors such as emotional maturity, personal and social responsibility, and the desire to achieve through working independently were better predictors of those students who would actually graduate from college

than were the traditional aptitude tests."

She relates, however, that with students whose high school grades had only been average, scores on basic skills are better predictors than personality and ability tests. The less able college readers have been described as having greater deference (10) and abasement needs than their classmates (10, 12), being less self-sufficient (10, 1), more anxious (17, 10), more aggressive toward authority (17), and possessing less ego strength than their better reading counterparts (21).

Research suggests the potential of counseling procedures in order to help students improve their reading scores (13), study behaviors (7), and grade point averages (5). Bednar and Weinberg (3) reviewed twenty-three counseling treatment programs for underachievers to delineate the dimensions of these programs which were associated with improved academic performance. They concluded that lengthy, structured counseling, either individual or group, aimed at the dynamics of underachievement and used in conjunction with an academic studies course was the most potent of all treatment methods. It was emphasized that the more effective counseling treatments included the therapeutic conditions of empathy, warmth, and genuineness.

## COUNSELING IN THE INDIVIDUAL CONFERENCE

The individual conference is a means of enhancing student self-esteem. The instructor serves as a catalyst in building the student's self-concept as a learner and the student's concept of learning. In this one-to-one setting, the focus is on the learner and his learning processes. The following excerpts typify student remarks and instructor reactions in the individual conference.

> "I dropped biology today. It was just getting to be too much," is regarded by the instructor as a wise decision at the present time and the student is encouraged to expend his added time fruitfully so that he will succeed in his other courses.
>
> "I'm going to try to read a book by Wednesday," may be valued as a lofty objective but one which the instructor believes the student will achieve.
>
> An enthusiastic, "This rate building machine is really helping," is viewed with delight.
>
> "Would you read this paper for English class and give me some suggestions?" is received with pleasure that the student would want to share his writing with the instructor.
>
> A student who states, "I'm pretty good on the details, but the main idea is something else," may be referred to a programmed material and asked to see if that doesn't help.

> A student who relates, "I don't agree with this article," is encouraged to tentatively trust his opinions, but to find out more about the topic.

In these three to five minutes interactions between student and instructor, the instructor serves as a responsive listener. Encouragement, humor, and realistic performance expectancies are used to facilitate the learner's quest for self-fulfillment. Self direction is the learning process and conference content; it is the medium and the message (4).

## THE INDIVIDUAL CONFERENCE AND SKILLS INSTRUCTION

Many of the course skill objectives such as comprehension, rate, flexibility, vocabulary development, dictionary usage, notetaking skills, critical reading, and the recognition of the author's organization, main ideas, and significant details vary from individual to individual. Students formulate their objectives with the instructor as they analyze their reading profiles on the *Iowa Silent Reading Test* given early in the course. This initial self-analysis leads to a continual self-evaluation of goal performance which the student is called upon to maintain on individual charts and graphs and discuss with the instructor in subsequent conferences. Entries are made in the instructor's notebook at each conference concerning the students' goals and progress towards their accomplishment in our multi-media reading laboratory materials. Vocabulary card files which include words, their usage in context, and definitions are widely used. The words on these cards are unique to each student. They consist of terms from content related reading for their other course work, words from self-selected materials, and Latin and Greek derivatives.

Students who relate that they are having difficulty in taking notes in their other college classes are urged to secure inexpensive cassette tape recorders and request permission of their professors to record their lectures. Listening more than once to a lecture and replaying particular portions leads to a more efficient note taking and organizational skills. When assistance is deemed necessary as a result of the evaluation and discussion of notes in the individual conference, these students are referred to prepared tapes and accompanying workbooks in the reading laboratory.

My observations of students pursuing self-declared skill objectives concur with Carl Rogers' (15) statement " . . when students perceive that they are free to follow their own goals, most of them invest more of themselves in the effort, work harder, and retain more of what they have learned, than in conventional courses." Occasionally the original objectives are abandoned in favor of strengthening skills in areas that were not seen to be important. More often, the objectives established in the first conference are pursued throughout the course and other objectives are added as the acquisition of other skills is perceived to be important by the student.

## THE INDIVIDUAL CONFERENCE AND SELF-SELECTED READING

Should the enjoyment of reading be a concern of college reading courses? Maxwell (11) states that it is an important component of college success, yet thirty-seven percent of the students at Mississippi Southern College were reported to have never or rarely used the college library for pleasurable reading (18). If the type of reading material a student uses makes little difference upon his improvement in textbook comprehension as reported by Dubois (6), it would follow that self-selection of reading materials would serve to benefit the student's reading competence as much as some texts which are published for use in college reading courses. The development of lifetime reading habits is dependent upon the reader's interests and attitudes (20) and the extent to which reading material meets the affective dimensions of the reader (16). Labrant (9) reported that the number of books read at a later date by students who had experienced self-selection of reading materials in an individualized program markedly exceeded that of comparable groups who had not been given the opportunity for self-selection. Therefore, self-selection of reading materials appears to meet the immediate textbook comprehension problems of less able college students and serves to develop the enjoyment of reading and lifetime reading habits.

The individual conference is a method by which students can self-select individual titles and express themselves about topics which make a difference to them. It provides a responsive setting where the instructor shows genuine interest in the student's motivations, ideas, and opinions. It is that rare time in a frequently impersonal educational scene where the individual student is perceived as being a very important person. His reasons for selecting specific materials are perceived as being significant and his attitudes thus acquired are viewed as valuable and worthy of further investigation. It is the occasion where a less than enthusiastic response to Orwell's 1984 led to a thorough enjoyment of Huxley's Brave New World and a keen desire to read Toffler's Future Shock. It is as Dan said, "When you talk, you read, and when you read, you talk. It's all intertwined like that."

Students are asked to make a contractual agreement as to the number of newspaper and magazine articles they will read and report on. Lists of newspapers and news and literary magazines found in the library are provided, and it is suggested that they get the flavor of many sources including those not found on the duplicated lists. Reports on these articles take the form of written summaries, reaction articles, comparisons of articles over similar topics from two or more publications, or letters to the editor. Students are asked to provide the instructor with a xeroxed copy of the article or articles discussed so that assistance and encouragement might be given during the individual conference. Students are asked to select only articles in which they are intrinsically interested. The papers they submit cover such diverse topics as the draft, the wage-price freeze, the generation gap, business news, the Vietnam War, marriage and family, adoption, hunting, fishing, and football. *The Daily Oklahoman*, *New York Times*, *St. Louis Post Dispatch*, *San Francisco Chronicle*, *London Times*, *Wall Street Journal*, *Time Magazine*, *Saturday Review*, *Sports Afield*, and *Reader's Digest* are examples of source materials used in these reports. This activity is relished by some students who feel stimulated to find what others are thinking and writing about issues of current interest. They delight in being able to express themselves about these topics and endeavor to clarify their positions through perfecting their writing skills. Others, however, are more interested in books.

Carl is a student who contracted to read books almost to the exclusion of reading periodicals. This eighteen-year-old freshman, who showed an increment of fify-six percentiles on the pretest and posttest of the *Iowa Silent Reading Test*, stated that his interest in reading books was due to the opportunity for choice in titles. Before, he related, he had been required to read particular books in English classes and found the material very dull. His outside readings consisted largely of current and paperback titles and included *The Graduate*, *Number One*, *Black Like Me*, *Ophelia*, *Call of the Wild*, *Each Other's Victims*, *Stories Not For the Nervous*, and *Stories that Even Scared Me*. Some books selected by other students have been *Anyone Can Make a Million*, *Behind the Scenes in Vietnam*, *Up the Organization*, *American Indian Policy in the Formative Years*, and *The Peter Principle*.

It is not possible for an instructor to have read all the books which his students may self-select. How, then, is a situation structured in which the student gleens the central thought, recognizes significant details, and makes inferences and value judgments? Each student is asked to develop purposes for his reading (19). He becomes a self-propelling learner as he applies the scientific method (14) in selecting, correlating, and organizing information to fulfill his self-designed objectives. A content guide for literature (2) and purposes which cover main idea and relevant details, inferences, value judgments, and critical reading are supplied to each student. The students are free to select from these purposes or to establish others which are more meaningful to them and the book of their choice.

The self-selected purposes and informal questions serve as a basis for book discussion in the individual conference. Characteristic of a question to develop the central thought and supporting ideas is, "What is the theme of your book and how did the writer develop it?" Value judgments such as, "Do you agree with the thesis of the book? Why or why not?" and "Is there a character in your book with whom you would like to become acquainted?" opens the avenue for a rich discussion which does not limit itself to factual recall. Inferential questions such as, "What do you think will be the effect of _______ (something just related) on the future development of the plot?" are often used in the individual conference when a book has not been completed.

My initial evaluation of this organizational structure has been quite encouraging. Growth between pretest and post-test measurements was recorded for the fall semester. Student reactions have been generally favorable concerning the number of choices of activities and materials with which they work although the initial burden of self-direction is formidable for some. Their reactions to the individual conference such as, "It shows you're interested" and "It keeps me on the ball" have been most favorable. Student progress in self-direction, reading competence, and enjoyment of reading have convinced me that when all my cards are on the table, the individual conference is my winning card.

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# IMPLEMENTATION OF STUDY SKILLS IN READING

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How many of our students today are singing this theme as they go merrily on their way? The problems of deficient reading and study skills are by no means confined to school dropouts. Elliot (6) has noted that "Seventy-five percent of academic failure is due simply to poor study and examination techniques." But Cofsky (3) concluded from a research of 302 college freshmen having academic difficulty that "four out of five of these students were experiencing difficulty as a direct result of inferior study practices." Marksheffel (10) has estimated that from 30 to 40 percent of the high school students lack sufficient reading skills to read their required texts. A similar picture is reflected in the open door colleges, only one stop removed from high school. With the current focus on learning instead of teaching, a student's academic success depends, more than ever before, upon his own ability to obtain knowledge independently. In the same light, it is our responsibility and obligation, more than ever before, to equip every student with the necessary skills to achieve that success.

What are those skills and how do we implement a program to assure their development?

## DEFINITION AND SCOPE

A review of the literature on reading and study skills often reveals a confusion surrounding the terminology. Frequently the term reading is joined to the term study. The role of reading in the total role of study is apparent. Basic reading skills--word recognition, comprehension, interpretation and critical evaluation--are all a necessary part of study-type reading. Though reading can be performed without the process of study, successful study is dependent upon reading ability. Good readers are not necessarily good students, but good students have generally developed adequate reading and thinking skills.

Herber (7) has suggested in his discussion of the terminology that "study skills refer to the application of reading skills to specific study tasks." Without question, students engaged in independent study must understand and react to what they read. The recognition of the close interdependence and relationships between the two skills is perhaps the cause of the confusion.

For the purpose of clarification in this discussion, study skills will be defined as those specific sets of skills, including necessary reading skills, which enable the student to learn and obtain knowledge independently. In addition to the essential skills, a disposition or attitude towards study is a prime factor in efficient study. Karlin (9) has suggested that study skills, habits and attitudes form a hierarchy. A failure in one skill adversely influences the performance in another.

## ORGANIZATION OF A STUDY SKILLS PROGRAM

The basic philosophy upon which the Ricks College Reading Center has been built is that, with an open door policy, comes an obligation. The open door invites many deficient readers who will continue to fail unless opportunity for success is provided. The sole purpose of the Reading Center is to help students learn and develop those skills needed for academic success in their other courses. The role of the Reading Center has expanded to offer instructional services to average and above average readers as well as provide remedial and corrective instruction where needed.

To keep pace with the expanded role of the Reading Center, three types of learning programs have been developed:

1. An individualized program in which the student is given extensive diagnostic tests and regularly scheduled individualized instruction from the Reading Center instructor.
2. An independent program in which the student comes to the Reading Center at his own convenience, as frequently as he desires. His program of instruction is cooperatively planned, but independently carried out. The instructor is consulted only periodically.
3. Group classes in college developmental reading with special emphasis upon reading comprehension.

Attendance at the Reading Center, on an individual basis, is voluntary, and no credit or grade is given. Because the measure of success is an increased grade-point average, the student comes with a "built-in" motivating factor. The classes in College Developmental Reading carry 1 hour credit, and are self graded according to attendance and involvement in developing and applying the comprehension and study skills techniques. The resources of the Reading Center are available to all Ricks students who are registered in the Center. There is no fee or tuition beyond the normal school tuition. However, the enrollment is limited to Ricks College students only.

## INDIVIDUALIZED INSTRUCTION

A student with a serious reading skill problem enrolls in the individualized program. He is scheduled into the Center on an appointment basis. The instructor is responsible for diagnosing the student's problem and programming corrective lessons. Multi-level materials and several modes of learning media are used in developing a lesson. Each lesson generally lasts one hour. The first fifteen to thirty minutes of the lesson are spent in individualized instruction, and the student spends the balance of the time working independently in the lab area. As the student leaves the Center, he leaves his record folder, which contains his lesson plans, diagnostic information, and answer sheets in a student's file. This procedure allows the instructor to review the student's performance and plan the next lesson before the student returns for the following appointment.

## INDEPENDENT PROGRAMMED INSTRUCTION

The Center contains a wide variety of materials and media that lends itself to independent study programs. Both diagnostic tests and instructional materials are used in the various media, independently and in combination. This type of instruction differs from that above in that the student receives only a diagnostic screening rather than a diagnosis in depth. The student and instructor together plan the student's program of independent study and instruction, based upon the student's felt needs and screening tests. The program is planned to attack a single problem or a series of problems in reading and study skills. Unless the student encounters an obstacle, he progresses independently to the conclusion of each program before he consults the instructor. He keeps his own progress records in his folder, which is always returned to the student file in the Reading Center. This allows the instructor to review the student's progress periodically and make any notations or changes in the student's program as needed.

## GROUP CLASSES

In August, 1970, Developmental Reading was initiated for the first time as a credit class, on a regularly scheduled basis. Eight sections of 20 students each are scheduled for an eighteen-hour course (nine weeks, 2 hours each week). The Developmental Reading course is designed to refine and extend the basic reading skills and develop reading comprehension skills in the college curriculum. The emphasis is on the development of an efficient, flexible reader through the application of a variety of reading techniques, techniques which develop comprehension in reading. The class is functional rather than theoretical in nature. The student develops the needed skill through class participation, then applies the skill in class to the various curriculum text books.

In addition to the above described class, a College Preparatory (basic skills) reading class began in August, 1971. Like the Developmental class, this class is functional, rather than theoretical, utilizing the student's own curriculum text books to develop word recognition skills, vocabulary development and spelling. The College Preparatory reading class is scheduled for 18 hours of instruction, 2 hours a week for nine weeks, but carries with it no credit. The principal role of the preparatory reading class is the improvement of the deficient reader sufficiently to cope with the minimal demands for reading. The logical sequence for students from the preparatory class would be to continue instruction in the Reading Center, either individually or in the Developmental Reading class.

## IMPLEMENTATION OF THE PROGRAM

Diagnostic Procedure. Regardless of the type of learning program a student selects, the initial procedure is basically the same. The extent of diagnostic testing is determined by the findings of the initial screening. Every student who comes to the Reading Center completes a registration sheet. The student himself establishes his objectives in terms of his specific weaknesses and skills for which he feels a need. A short autobiographical sketch is also called for, which reveals much about the student's background. An analysis of the registration sheet reveals much about the student's vocabulary, spelling, and writing, as well as his self image or other emotional factors.

An additional diagnostic tool is used: the "informal vocabulary inventory." This is a timed inventory in which the student is asked to list alphabetically as many words as he can think of in ten minutes. The inventory immediately reveals the student's spelling and writing skills as well as the extent and complexity of his vocabulary, whether monosyllabic or polysyllabic words, technical or general vocabulary.

Any further diagnosis is determined by the individual needs of the student and the learning program he has selected. Students who have registered for the College Development class, but who definitely lack basic skills, are referred to the Reading Center for further diagnosis and individualized instruction.

Instructional Procedure. The most common skills called for in the study skills program are (1) Vocabulary development with spelling, (2) Reading comprehension of content area texts, (3) Organizational skills, (4) Reading graphic materials, (5) Preparation for and techniques of taking tests.

In addition to the conventional instruction in vocabulary development, the kinesthetic-phonic technique of word analysis has proven to be one of the most successful techniques used in the Reading Center. This has been used successfully by accelerated students on technical vocabulary as well as the below average student on a basic vocabulary.

Reading Comprehension in the content area is the most widely sought after skill. Based upon the philosophy that the greatest contribution to a student's success is his ability to think, to listen, to read, to write, and to do, the core of reading for comprehension is the application of a reading formula, the SQ4R. Revised from Robinson's SQ3R (21), the newer formula involves a different approach--one of turning the mental process into a physical process, a process of doing, integrating the language skills named above. Over a period of four years this formula has been applied and has brought success to numerous students who had known Robinson's SQ3R formula but who had failed to apply it. In contrast to the earlier formula, the SQ4R specifies the necessity of writing questions, suggested by the topical headings, as the survey is being conducted. The 4 R's then refer to: reading to answer the question or identify the central and related ideas; rephrase and reduce in your own words in as few words as possible; record the main ideas in the "telegraphic" form; then recall, without looking at the text or reading notes, the sequence of central and supporting ideas (in writing).

As a phase of developing questioning strategies, students learn to function on the higher levels of thinking and reading, interpretive and critical reading as well as the literal level. This provides greater purpose for reading, thus, greater comprehension.

Organizational skills are learned in conjunction with the recall step of the SQ4R. In addition to recall and recording in outline form, relationships of details and variables can be identified in chart form. It has been found that charting aids recall much more readily than an outline of the same data. A chart lends itself more easily to visual imagery. In the same light, charting and recall charting is one of the most successful techniques of studying for a test.

Reading graphic material is sometimes a problem confronting the student. To understand the problem at hand, one must understand the place of graphic materials in the hierarchy of learning or the learning pyramid. Before one can learn from a higher level of learning activity, he must have experienced the same concept on a lower level of learning. All abstract learning must be preceded by concrete experience. Only then do abstract representations take on meaning.

Evaluation of Progress. Evaluation is an essential part of the reading study skills program, not only to determine the progress of the student, but to measure the success of the program. Maxwell (11) has described the limitations of using standardized tests to measure student progress. Not only do such tests measure variables other than the student's specified objectives, but they mask individual differences. Using the student's stated behavioral objectives together with the overall objective of an improved grade-point average, the evaluation of a student's progress is determined jointly and in consultation between student and teacher.

## THE ALL SCHOOL PROGRAM

To every reading specialist comes the old adage, "Every teacher a competent teacher of reading in his content area." How far removed from reality this appears to be on a college level. What are the deterrents to such a possibility? First, many college faculty are not "educators" but, rather, subject area specialists. Their philosophy: if a student can't read, he shouldn't be in college. They see their role as a disseminator of knowledge. Secondly, many faculty recognize reading deficiencies in their students but "solve the problem" by referring the student to the Reading Center.

At Ricks College, it has taken more than four years to build a working relationship with other departments. At the beginning of the current school year, the Reading Center was requested to give an orientation period to the Divisions of Education and Social Sciences. From that initial orientation period has come an involvement of a number of departments in helping students succeed in reading.

An advertising campaign is conducted.periodically to extend the services of the Reading Center and make its services known to the other departments. Each faculty member receives a personal letter which contains questions concerning the specific reading needs of his students. Notices of Reading Center activities are published in the faculty bulletin. The college newspaper conducts an interview and prepares a story on the activities of the Center. Flyers and brochures are distributed throughout the school and directly to all faculty together with a cover letter.

One of the most effective ways of involving the content area faculty is through a telephone call pertaining to a specific student. When a personal concern for a student is expressed to that student's teachers, often a joint concern develops. As a result, requests for suggestions for improvement are received, not only for that student, but others having similar problems. This technique of involvement has been known to mushroom from one department to another. It has created, among many of the faculty, an awareness of the needs for multi-level reference material.

As teachers are becoming increasingly aware of the demands made in reading, they are looking at the readability of their texts. Requests are now frequently received to do a readability analysis of a text currently being used or one being considered for adoption. Where the text has already been adopted but is beyond the level of the students, suggestions for using the text for greater comprehension are given.

For the first time since the establishment of the Reading Center, individual consultation is being called for in addition to the regular instructional services. Implementation of study skills in reading cannot be confined to the Reading or Study Skills Center but is a total school effort, and only as such will it succeed.

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# THE PROCESS OF READING IN MATHEMATICS AND SCIENCE

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The UCLA Learning Skills Center is a resource available to students who need to improve their scholastic abilities in any one of several areas. Of the 80 new students seen for a first interview on science study problems during a recent typical quarter, approximately half had difficulty with reading in either science or mathematics. Over the years a technique has been developed which has proved helpful in many of these cases in enabling students to read with comprehension and at a reasonable rate. Where this technique fails there are usually other rather obvious factors at work in the student to prevent success.

The student who visits the Learning Skills Center for help is by-and-large self-motivated, since he comes voluntarily. The exception is the student sent by his academic counselor because he is subject to dismissal or on probation. Whether the method of reading described here succeeds as well for him is not certain. But it is clear that the technique works for the motivated student.

It is clear also that the average student who visits the Center carries with him the baggage of reading and study habits he acquired in high school. Unfortunately, these habits are usually a response to an indoctrination process. The conditioning to which the student has been subjected seems to encourage absorption of material for the purpose of regurgitating it on an examination. If, in the college milieu, the word education still carries with it some of its Latin origin (educere: to lead forth) then the post-high school experience will demand a change of study and reading habits by the student. Discipline, which has been administered from without, now becomes an inner control. Ideas and concepts, lightly touched previously, if at all, become the core of knowledge, and sheer memorization becomes an inadequate response to the increased demand for idea manipulation made upon the student by the enhanced rigor of college course work.

Nowhere does this inadequacy become more painfully evident than in the student's reading habits. And even if the student responds adequately, albeit not strongly, to the need to change his reading habits in the humanities, he still may have trouble with science and mathematics. What is being sought is an understanding of concepts and ideas. These are, after all, the core around which the author of a textbook has marshalled his facts and figures, these are what the examples illustrate and the problems relate to. Such concepts are easily lost in the wealth of detail on each page.

Too many students perceive technical books as "different" from their textbooks in the humanities or social sciences. Formulas, tables, and graphs scattered through the textual material are formidable obstacles to easy reading. The belief that the student will have to memorize all that data is petrifying and anxiety-producing. Add to this a certain distaste or a positive dislike of the subject matter, and there is created a practically insurmountable psychological barrier.

But this need not be so. It is possible to provide the student with a challenge to seek ideas and concepts by approaching the text "in a cursory manner" on the first reading. The implication is that there will be at least two readings. But what is meant by cursory?

From Webster: "Cursory--Passing hurriedly over or through something which invites exhaustive treatment."

Putting aside the question of a quantification of "hurriedly," it seems more appropriate to focus attention on the second part of the definition: " . . . something which invites exhaustive treatment." A textbook in science or mathematics certainly does this. The formulas, tables, charts, and definitions of technical terms all lie in wait to trap the unwary reader, to stall his progress toward concept-grasping with anxiety-producing detail. With a mental attitude that memorization is going to be needed, the student finds himself extracting items from the text for just this one purpose: memorization. On a first reading, nothing could be more disastrous than this tearing apart of the fabric of logical development, which constitutes the substance of the chapter or section.

Learning theory experiments show that lists of uncorrelated material (numbers or random word lists) can be memorized and recalled only under strict limitations. The superposition of succeeding lists in the memorization process makes the recall of previous lists difficult if not impossible. On the other hand, organized material such as a poem may still be recalled successfully even though other poems are learned subsequently. The student dissecting the textbook for crumbs of information is creating lists of uncoordinated, randomized material. Reading for the logical unity prevents this.

The analogy to a jig-saw puzzle is helpful. When the thousand-odd pieces are first placed on the table, the wise puzzle solver looks at the box cover to discover the pattern of what he is about to construct. He may note the shades and kinds of colors, the contrasts of shape, the details of the border. He may then turn to the pieces and begin a sorting by some criterion based on the analysis of the pattern on the box. Each piece fits in relationship to some others. He certainly would not pick up one piece and try to memorize its shape.

Yet many a student does indeed pluck a formula from the page of a textbook and attempt to memorize its "shape." He may even attempt to memorize an entire page without regard for what precedes or follows it. And then he is astonished when his subsequent efforts to recall the details are ineffective or when a problem he tackles relates to concepts he has seen only dimly if at all.

Let it never be forgotten that in physics, chemistry, or mathematics the formula is a shorthand. It describes succintly a logical thought, concept, or process. In a good textbook such logical thoughts and processes are described clearly and adequately, in familiar terms, before being put into "capsule" form in a formula or equation, using mathematical or chemical symbols. This new language, using a special symbolic alphabet, then becomes the communication medium of the student, but only after he has made the successful transition from the daily language of common speech.

In the life sciences, for example in biology or zoology, technical terms are employed which serve the function of a shorthand, a convenient nomenclature that describes precisely what is meant without extensive verbal circumlocutions. Analogously in the social sciences and humanities, technical terms are used in the same way and for the same reasons.

This implies that a textbook in any subject may be profitably approached by the student in the same way he approaches one in any other. The difficulty the student finds with the mathematics or science text is precisely because he feels it needs a different treatment. Far from seeing the similarities, he tends to exaggerate the differences, and thereby blocks his way to understanding. If this exaggeration is coupled with an anxiety about the (real or imagined) difficulty of the subject matter, or a pre-conceived notion that "he has never been good at . . . " whatever it is, then he has created a real obstruction to success in tackling that textbook, and, indeed, that course.

How then, does the student approach the textbook in science? Assuming that a "pre-reading" has been done properly, he will have already found out a good deal about the book itself. A science book has a table of contents, a preface, often an introduction, and usually an index. The preface or introduction will state the author's purpose. It will indicate the level of difficulty of the text. It provides a clue to what is not included in the text, and it often suggests a logical order for sequencing the chapters for different purposes of instruction or comprehension. The table of contents and the index complement each other, and together provide a detailed coverage of the book's contents. The index may have a "name" section as well as a "subject" section. This would indicate to the student what importance the author places on the historical research development of his subject matter. A survey of all this material constitutes "pre-reading."

Now the student puts into practice what has been called here "cursory reading." For each day's assignment, a chapter or a section is read as a whole on the first reading. No extra emphasis is placed on the reading of formulas or the scanning of tables or charts. These are noted in their place, and the "reasonableness" of their contents assures the student that he is grasping the basic concepts behind what he is reading. He must always remember that the verbal parts contain the logic and these basic concepts. The formulas encapsulate or encode the ideas. The path from the verbal to the coded form is easy (relatively), but it is virtually impossible to go the other way, at least on a first reading.

The student often finds it profitable to summarize his first reading of a section or a chapter by writing down two or three short sentences that express the ideas or concepts developed in the reading. This is just the sort of thing he might do with a book in the humanities, say in English literature. He reads a chapter, closes the book, and asks, "Now, what was that all about?" Precisely the same sort of reflecting is possible with a science text. The length of the section to be comprehended at one sitting may need to be adjusted, but the principle remains the same. The student may find that these summarizing remarks are very poor at first, especially if compared with any printed summaries at the end of a chapter. Encourage the student to keep trying. Practice will improve his ability to extract the thought from the chapter.

The student must also recognize that science and mathematics texts are written much more "densely" than other books. He cannot "skim" by reading the first sentences of paragraphs or even the first and last sentences. Too much new thought is developed in each sentence of a well-written science textbook to permit skipping of any sort. But cursory reading, as defined here, can be fairly rapid. It is even possible to say that the text is being read "like a novel" on this first reading.

If the cursory reading is done before each lecture, as it should be, several advantages accrue. First, the student is prepared for the lecture, in much the same way that an opera-lover will prepare by reading the libretto of an opera he is to attend, in order that the actions of the singers will be clear to him, even though the songs are in a foreign tongue. The lecturer and the student both know what comes next. There are fewer unpleasant surprises for the student. Second, it is possible for the student to edit his note-taking, putting down only those things which seem logically difficult, are different from the text, or provide clues to better understanding of the text. Any verbatim lecturing from the text is recognizable, and copying these remarks can be avoided. The student also has time to listen to the lecturer, instead of "taking dictation." Third, the facts disclosed by the lecturer fit into the logical structure, as the pieces of a jig-saw puzzle fit into place. The facts are related by virtue of the fact that the logical concepts are known, through cursory reading. Fourth, the cursory reading for tomorrow's lecture, if it follows immediately on the intensive study and problem-solving session after the lecture, provides a continuity of subject matter from one chapter to the next, and no segment is left hanging in mid-air.

What obstacles remain to prevent this very desirable state of affairs? Primarily the student's own attitudes. He is required to take a chance on a new method, to make an experiment in innovative learning. This is risky, and old habits are strong. But apathy and caution can be overcome bit-by-bit if some small experiments are undertaken. For a start the student may wish to re-read a chapter that proved particularly difficult. With a cursory reading technique, he may be able to put together a logical unit of thought by combining his new overview with the remnants of memorized facts and formulas he painfully acquired previously. This taste of success can prove stimulating.

Resentment of subject matter is prevalent, particularly when humanities students are "forced" to take a science course as a breadth requirement. Even a science student (pre-medical, for example) may resent a chemistry course because he views it as irrelevant to his goals. To such students, reading a textbook in science becomes an intolerable chore. Others face the task with the preconception that it is beyond their powers, since they have known all along, or have been told repeatedly, that they "could not do it." Or, the student has done little reading of any sort in this Television Age. Or, he may simply be appalled at the complexity of detail.

These barriers to motivation and consequent success in reading science and mathematics must be overcome. This takes time and does not sit well with the student who demands instant ability to read technical material. He must first be aware of his resentment, apathy, or anxiety toward the subject matter before he can gain this ability. If he can be induced to experiment with cursory reading there is a good chance that his motivation may be aroused, precisely because some of the material begins to make sense to him. However, there are closed minds, even in the young, and sometimes careful counseling is necessary before the student can take a first cautious step toward establishing good reading habits.

This is the most difficult part of the counselor's responsibility. He is aware of the passage of time and realizes that the course demands of the student his continuous attention to keep from falling behind. Also, he is taking other courses which clamor for the same prioroty. The stimulation of motivation unfortunately is an art, not a science, and it is a slow process. It is hard not to be able to respond to the "instant success" demands of the student without a feeling that one is betraying him by offering what must seem to be a diversionary tactic, in the effort to excite motivation. There is no easy answer to this. Each student is unique, and each case requires a different response.

One thing is clear: there is no way to avoid involvement with the subject. The student's role is active, not passive. He performs the cursory reading with some well-defined goals in mind. He searches for form, pattern, relatedness, meaning, and function in all his reading. He learns to develop his own keys to join ideas together as well as noting how the author of the text does it. He sees the logical course of growth of a concept, not only from section to section, but from chapter to chapter. He solves problems, not by finding a formula and plugging in the numbers, but by relating them to concepts, developing them as the examples in the text are developed. He learns to ask "why" instead of simply "how" when statements are read and theorems or theories are presented. He develops his sense of discovery and uses intuition to gain a sense of what it is all about. He accepts unquestioningly the worthwhile nature of his pursuit of understanding. He is involved.

The cursory reading process reinforces as it enables. As the ability to understand is enlarged, so is the confidence which keeps the student in his active role. And as the confidence increases, the anxiety is proportionately diminished. The student is freed to accomplish what sheer memorization fails to do: to gain a competence level akin to the professional in his field of study.

# THE LEARNING CENTER AND THE MINI COURSE

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During the year and a half that the Citrus College Learning Center has been in operation, we have served a variety of students with special problems. Utilizing peer counseling and tutoring, structured classroom experiences, independent study, in-depth counseling and testing, and autotutorial programs, we have combined a variety of approaches to meet the individual student's needs. However, one aspect of remediation, improving the student's writing skills, emerged as a major problem.

Our approach to this problem was successful only when the instructor or the staff worked on a one-to-one basis with the student. Because this technique required a disproportionate amount of staff time, we began to identify the specific writing problems our students experienced. One major recurring pattern appeared to be the student's inability to experience writing as communication or as a people-to-people activity. The same student who discussed well in class and communicated well with his peers did not see any relationship between these activities and writing. Furthermore, this misperception of writing prevented students from applying and integrating traditional writing skills. These students, otherwise comfortable verbally, were intimidated by a blank piece of paper; they were experiencing a massive writing block. In their vernacular, they were "uptight" whenever they had to write.

Since the problem was emotional rather than academic, we decided to experiment by using a marathon workshop approach. Perhaps an intensive experience combining instruction, discussion, and writing activities emerging from the immediate situation, and providing immediate feedback from peers and instructors might work. We scheduled two eight-hour Saturday sessions spaced four weeks apart and began encouraging commitments to attend from students. We asked the students to wear casual clothes and to bring lunches, pens, and paper

Our major problem was to find a suitable environment for the program. After much debate, we decided to request permission to use the faculty lounge. Because of its flexible furnishings, its comfort, its spaciousness, its adaptability to audio-visual presentations, and its potential for informality, it was an ideal room.

Attending students represented the full spectrum of the Citrus College community. The 112 students who attended the fall and spring semester sessions ranged in age from seventeen to sixty-two. Some students had completed all transfer English requirements; others had not taken any college English classes. Housewives, "hippies," police science students, returning veterans, minority students, transfer students, and terminal students--all were represented. Therefore, each activity had to be structured to permit students to share experience common to all human beings regardless of age, educational experiences and objectives, and personal philosophies. The common denominator became what we had shared as human beings in the past and what we would be experiencing together during those two long days.

Once we perceived the experience as an opportunity to share, the activities became easy to implement. We intermingled a variety of large group, small group, and individual activities. These shared experiences included innovative films, content from the discussions, and modified encounter techniques designed to generate a specific writing activity. During these activities we stressed the importance of communication--both verbal and non-verbal. As a result, the specific writing activities emerged organically from the immediate communication experiences; as the hours passed and people became relaxed and trusting, their desire to express themselves in writing increased. The primary instructional techniques were inductive teaching to introduce the activity and immediate feedback from both fellow students and instructors following each segment of the program. Incidentally, students commented positively on the value of instant feedback because one factor that contributes to student anxiety is the delay between performance and evaluation.

Specifically, each activity was divided into four segments: introduction and demonstration by the instructors; a discussion activity that explored the instructional problem; group or individual writing to practice the skill presented by the instructors, and by student aides; as a last step, the instructors structured the writing problem and indicated how this specific technique might be used in college writing. Using this format, we explored narration, description, identification, definition, exposition, comparison and contrast, and outlining; we also clarified pre-writing, writing, and re-writing, another major student concern. Finally, we were able to dramatize the necessity for clarity and precision in written communication since the writer is not present to interpret his meaning for the reader.

Although these rhetorical techniques are part of much formal English instruction, our workshop students had been unable to apply them successfully. Our feeling is that their mis-perception of writing as an activity apart from other communication experiences had produced this schism and had contributed to their writing blocks. A relaxed atmosphere, a desire to share and trust, and an integrated instructional sequence which provides for immediate feedback can be employed to diminish student anxiety and even to teach traditional skills in a non-threatening manner. After all, writing is people-to-people communication and maybe that is what our workshop was really about.

# COLLEGE READING: WHERE IT IS

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This paper is not intended to be a state-of-the-art report on college reading/study skills. Rather, it attempts to be a brief review, assessment, and tangential evaluation of some selected trends in college reading/study skills programs.

Since a person's judgement is no better than his information, let me mention that resources and other preparation for these observations include 1) the rather deliberate review of research and other reports on college reading; 2) visits to facilities and with personnel on eighty campuses and other institutions designed to effect adult learning; 3) production of two research instruments on the subject; and 4) a term of office as president of Western College Reading Association, in which capacity one receives all manner of opinion on where college reading is and, occasionally, some specific recommendations on where such might be put. Altogether, this input is liable to produce a review disposed toward anxious criticism; for a sizeable portion of a president's day is spent in worrying about what has gone wrong between that day and the publication of the last Newsletter.

## THE PROFESSIONAL PRACTITIONER

The preparation of college-level pracitioners in the art of healing reading disabilities continues to be a haphazard affair (12). In fact Martha Maxwell's 1967 observations (17) continue to be essentially true: that such practitioners consist of those people willing to accept an unusual calling that is abhored by most others in the academic structure; that they do not tend to remain in the field very long; and that if they produce significant research or writing in the field, they tend not to assume leadership in, but rather, to disappear from the college-reading scene once they have written their dissertations.

One is inclined to view a fair proportion of established college reading teachers and directors as well as their objectifying programs as he would a vintage automobile that has been given extraordinary care (5). As one views its polished, gleaming chrome, its authentically restored leather upholstery, its surgically sanitary engine and running gear, its carefully matched and pampered paint job, he is awed by this one-time article of innovation that still stands stately and proud, although its transportational utility on today's highways is extremely limited if not altogether dangerous. Thus, the viewer gives due tribute to history; he pays his respects, but he does not model his contemporary vehicle upon ingenuous engineering.

Nor can we look to graduate schools to supply colleges with newly trained practitioners prepared to cope with the realities of open enrollment. What passes for training of college-level practitioners continues to amount to an assemblage of generalized and poorly defined education sequences consisting of child-oriented theory courses from which graduate students are supposed to extrapolate methods that can be applied to adult populations. In fact, most of the textbooks on reading methodology refer to the teacher as "she" and the client as the "child." Although as college reading specialists we deal with students whose reading levels can be measured as being in the lower grades, we are in fact dealing with clients with thirteenth-grade-plus glands, desires, and failure syndromes. Because these students have developed highly sophisticated defense mechanisms against conventional instructional strategies, they do not respond to elementary nostrums that were probably ineffectual when they were first applied in the lower grades. (13:8) Even the textbooks fail to recognize or at least emphasize that "learning to read and the mature act of reading are separate skills and should be studied as such." (24:3) Such curricular conditions may even be regarded as holding patterns perpetuated to provide graduate schools with low-cost labor and to keep potential practitioners from an overcrowded market. Also, these conditions are lending credence to the "inconsequentialization" of the education doctorate as an avenue to effective preparation.

Finally, and as national, regional, and state surveys continue to inform us (3) (15) (19) (25), most of us in college reading/study skills programs reside under the administrative and budgetary auspices of an English department. Consequently, teachers who work in these programs are, by training, residence, and disciplinary leaning, inclined to be trained in literature and other aspects of the humanities that stress writing skills, literary history, and literary appreciation. Already an endangered academic species, English and literature teachers have encountered training chiefly in the ideodynamic literature of our culture and are not disposed to deal with the severe and very basic learning problems of a student who is battling to survive in college. Nor are they liable to be sympathetic to a client who, at best, is semi-literate, much less appreciative of the nuances of literary technique.

## THE PARAPROFESSIONAL

Partial answer to the problem of poor practitioner preparation is the paraprofessional, whose integration in college reading programs is increasing at a rapid rate. Witness the volume of literature of the past year written by (16) and about paraprofessionals engaged in survival programs (1) (2) (10) (21).

Such a dramatic rise in popularity is attributable to a number of circumstances and practices, some of which are questionable. Since paraprofessionals are usually younger people, they answer a need for energetic and empathetic technicians and tutors to sustain clients' learning activities in the laboratory; consequently, they prove invaluable to the practitioner who attempts to effect individualized learning. To the administrator with his careful eye on the academic dollar, the paraprofessional represents a welcome cost-cutting expediency who, although he may lack certification, may nevertheless possess qualification for the taxing task of inculcating needed basic communications skills in a client. Indeed, a paraprofessional might even be defined as one who is given neither the official responsibility nor the pay of a professional. He has, therefore, become a real threat to some certificated personnel who have been coasting on their credentials. Finally, and perhaps because they lack pedigree and therefore have not assumed a professional posture, paraprofessionals are proving to be invaluable as they become integral to disadvantaged or compensatory programs, programs that, at least in large, urban colleges, attempt to serve Black, Chicano, and other high-risk minority populations for whom more open-door colleges are making accommodation in their academic structures (8) (9) (14) (28).

## DISADVANTAGED AND COMPENSATORY PROGRAMS

Partly because other academic disciplines are not so responsive, various federally and state funded disadvantaged and compensatory programs have become attached to or allied with reading programs, clinics, and learning centers on campuses that attempt to lend credibility to otherwise disillusioning or non-existent open-door policies. Students entertained by these programs constitute the first echelon of the new student avalanche, which very few instructors in the academic community are emotionally or intellectually prepared to educate (14). However, more and more reading practitioners are aware that if most minority students are going to survive in the academic system, they must obtain innovative, personalized academic treatment. Increasingly, practitioners are cooperating with ethnic facilitators, peer tutors, peer counselors, financial aids officers, and other coordinators of institutional welfare whose purpose is to keep minority students in courses, in school, and finally to provide them with the instruments for obtaining the American dream, a college education.

Whether or not many faculty or the academic community at large like or appreciate the special accommodation afforded by such compensatory programs is of little consequence. There is every indication that, as the "complexion" of our campuses changes, conservative faculty shall be disturbed both by the style and the scale of this transformation. The fact is that such programs are encouraging more minority students with nontraditional life styles to become involved in and to complete their higher education. The inclusion of such students is affecting not only instructional strategies but also the total academic environment. Even now disadvantaged students are having a traumatic, purgative, and perhaps altogether healthful effect on collegiate educational processes.

## DIAGNOSIS

To say that mass standardized testing instruments are generally inadequate to measure the reading abilities of compensatory students as well as other high-risk college-level clients is to say nothing new. Most of the tests we have are normed on generalized college populations and tend to measure levels of achievement in identifiable areas construed to stand for reading: vocabulary, speed, comprehension. Such tests clearly do not tell us much about the reader who registers in the lower percentiles, not do the broad areas measured lend themselves to prescriptive interpretations that lead to effective treatment. While these mass testing devices may be expedient to identify and sort certain weak readers that might be conveniently enrolled in "developmental" courses, they serve only as a crude sorting device that corroborates what the practitioner already suspects - severe learning disabilities.

The truth is that in the vast majority of cases we fail to diagnose at all. Even in the area of comparatively easily diagnosed somatic debilities, we neglect to identify students who fail to learn because of untreated, often medically remediable problems. For instance, in not one of the previously mentioned eighty-odd facilities visited was an adequate visual screening survey consistently employed on all students seeking help or otherwise being referred to a learning specialist for help. Audiometer tests enjoy the same status. Seldom are pronounced speech difficulties diagnosed; less often are they given competent treatment by or through agencies of the college. Moreover, studies (11)

(18) (22) have clearly established that a very significant proportion of a college's "learning problem" population may suffer from problems in fusion, binocular coordination, focusing, auditory discrimination, auditory and visual memory, and visual association - all or any one of which may attend and/or affect more academically lame students than we have chosen to admit (18).

If the word accountability is to be more than merely a respectable epithet to be strategically uttered during a lull in a pedagogical conversation, then in our diagnoses we must assume professional responsibility. Therefore, perfunctory pre-post-testing or standardized tests, be it ever so systematic, no longer passes for accountability, whatever the percentile gain. The day is upon us when we shall enjoy legalistic status with our medical peers in the area of negligent behavior. The practitioner well might be sued for prescribing a speed reading course if his client has not first of all passed a competent visual screening survey. Again, the practitioner might be held liable if he does not refer clients with learning disabilities that he is not competent to treat. It seems consistent with a discipline that purports to call itself professional that we should not be exempt from malpractice suits.

## MATERIALS

If one of the more significant findings and interpretations of the Sweiger report (25) is correct, it is in our materials - the boxes, the kits, the hardware, the software, the books, the trappings, if you will - that one will find the character, effectiveness, and direction of what we do. Sweiger states:

> It appears that, to a large degree, the materials available are determining what is being taught. For the instructor having no education in reading instruction, this may be regarded as at least a security blanket. (25)

If material control our programs' destinies, the implications are interesting. A practitioner can blame his ineffective program on the lack of materials or on the allegedly poor choices of materials made by his predecessor, who left them behind. Also, the variety and proliferation of materials in a given program might be construed as the expression or symbol of its versatility or as signifying the abundant broadmindedness, the abandon, or lack of discrimination of its director recently in possession of a generous grant.

Whether or not there are gross reciprocal effects between programs and materials, there is every indication that we continue to review texts and materials for adoption intuitively, without, first of all, reading them thoroughly or working them out with empathetic impulses (13). We continue to use materials based upon whim, upon propinquity, upon habit, or upon pedagogical predisposition, rather than upon any objectively measured effectiveness (6). Often we sustain materials on traditional grounds, believing they are necessarily enhanced by use and time. The practitioner cannot rely upon reading journals to evaluate competently materials that might be relevant, for such reviews are "usually subjective, tend to be equivocal, seldom point out inadequancies, and are virtually never supported by research findings." (13:7) Nor, except in rare cases (4), is any materials gap likely to be filled by a responsible publisher who will pre-test or carefully evaluate materials before they are offered on the market (26).

## FACILITIES

With few exceptions, most of which have appeared in the last five years, facilities for reading/study skills programs and learning centers consist chiefly of the left-overs, of architectural relics, of damp basements, uninsulated bungalows, and makeshift lecture-classrooms that reflect neither the advances in electronic sophistication nor progress in industrial design that has occurred in the last quarter-century. Ironically enough, probably the most innovative faculty member on campus, the reading person, enjoys the most out-dated housing. It is as if he didn't know better.

In the opinion of reading/study skills personnel who will speak frankly, such inadequate facilities are a matter of both choice and ignorance: the choice of an administration that is ignorant enough to relegate reading/study skills programs to the category of low-grade service courses. Even while voicing humanitarian sentiments consistent with open enrollment, administrators fail to match their alleged understanding with their generosity.

Except for the vision and energy of the practitioner, facilities are playing, perhaps unhappily, the most important part in the development of viable, efficient reading/study skills programs. First of all, the facility itself to a large extent determines not only how many students shall be served but also the kinds and versatility of materials that can be employed (20) - the number of choices that can be offered a student. Next, if the size and nature of the facility limits the materials offerings therein, then facilities would (as a corollary to Sweiger's statement about the importance of materials (25) be the fundamental factor that affects our reading offerings. Moreover, to the extent that the limitations of the facility constitute the limitations of learning alternatives, the facility is a paramount ingredient. Finally, to the extent that the behavior of the practitioner and client alike is affected by the reality and the symbolism of their architectural surroundings, it is important that we enjoy ecological dignity commensurate with the complicated and serious purposes we pursue.

## CONCLUSION

The lot of the reviewer, the observer, is a lonely one. In his search for truth he must be the judge of his findings, and he must live with his conclusions, many of which in this paper are negative. Such negativism is, it seems, a natural consequence as one attempts to assess a rationale and a methodology that strives to bring about the mathemagenic miracle not tackled by other academic disciplines. Having very deliberately chosen to be in the behavior modification business, we have accepted the role of learning facilitator for students who would otherwise fail or be cooled out. Having to decide whether the academically troubled student is "either a great problem or a great opportunity," (4:6) we have chosen the latter view. As the myth of the historic success of American education comes into question and as the more dramatic failures of contemporary education become cliches of public discourse, we might yet be the one unassailable unit within the system.

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# COUNSELING APPROACH TO IMPROVEMENT OF READING AT THE COLLEGE LEVEL

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## RATIONALE

Today's college population includes greater numbers and a wider range of academic preparation than ever before. The working student, the married student, the student with bilingual or cultural differences, and the older student now comprise a larger percentage of the student body. Reading difficulties added to problems realted to background, mental set, and emotional barriers are more common. Such problems affect the student at college level with greater force. He has had a long time to build emotional barriers, much experience of failure and self-dissatisfaction, and a growing sense of urgency often reinforces his now-or-never tension.

The traditional classroom and familiar lecture/drill/homework program too often fails to help those students, who must break emotional barriers and negative attitudes toward learning before they can make significant progress in improving reading skills or study habits. Large numbers, insufficient funds, and the shortage of trained reading specialists at the college level make it difficult for many colleges to offer enough individual tutoring or reading labs.

Methods which combine improvement of learning attitudes and self-image with growth in the kinds of reading rate and comprehension needed for success in college study are increasingly needed. This paper suggests techniques which can be used in an ordinary classroom with thirty or more students, by the college instructor with no specific training in counseling. They can and are used equally well in reading labs and learning centers.

## PROGRAM GOALS

1. Assessment of entry behavior: Attitudes toward learning, self-image, reading skills
2. Individualization of the program to meet the needs of each student

3. Understanding of the effect of attitudes and mental set on learning
4. Orientation to team problem-solving and independent study
5. Improvement of reading skills, attitudes, and self-concept
6. Assessment and improvement of skills in studying, test-taking, and writing research papers
7. Assessment and development of ability to transfer self-understanding and reading skills to other areas of the student's present and future life, such as other college classes, jobs, personal decision-making, and self-actualization

## LOGISTICS

Room Arrangement: Chairs and tables for groups of 5 or 6 are preferable. If unavailable, chairs with writing arms can be arranged in small circles. Areas where 1 or 2 students can work alone and where the instructor can meet privately with individuals for conferences should be provided. Small-group centers, where students with similar needs can use audio-visual equipment, work in special phonics, spelling, or other training groups are helpful.

Individualizing: Standardized tests and informal inventories or pretest should be used to assess entering skills and attitudes. Pre-developed contracts or checklists of suggested learning opportunities and options can then be marked for individual students (see sample). It is important that such contracts list every opportunity and option to be available during the semester, in order to save time as monthly or six-weeks reassessments are made and changes in individualized learning opportunities are marked by the instructor.

Instructor's Time: In this program, the instructor's time is used in pre-planning and assessment of students' strengths and limitations for purposes of marking individual contracts or checklists; orientation of the class to team problem-solving and independent study, as well as to materials and machines; some directions and discussion of group Buzz Sessions and Role Playing; individual conferencing and use of Communication Papers as a self-concept building and motivational device; and post-testing/evaluation of prgress.

Students will work independently or in small learning teams most of the time, as is necessary in an individualized program and to free the instructor to meet with individual students in conferences. The instructor will need to set up a schedule of conferences, so as to meet with each student at least once every 2 weeks. Conferences will vary in length from 5 to 15 minutes, depending on student need. Most instructors find it valuable to begin with the students having the greatest communication, reading, or attitudinal problems. Others use alphabetical order, with interpolation of those with special problems as necessary. It seems to be of more value if students are not given a set schedule of conferences in advance, but are expected to come for a conference when called upon.

## PHILOSOPHY

Counseling philosophy essential to the success of the program is already familiar to most successful teachers of reading. It includes these attitudes.

1. I like and respect you as a person
2. I find your ideas and feelings both interesting and worthy of thoughtful consideration
3. You are not alone-others have the same kinds of reading and attitudinal problems that you have
4. We have many ways of helping you-research into adult reading and learning difficulties has resulted in a wide variety of techniques and materials
5. You and I will constitute a learning team to discover your needs and find the techniques that will work for you
6. Peer-group problem-solving has been proven to be very helpful to adults, so you will have the experience of using the strengths of your own group as one of our learning opportunities
7. Your problems in succeeding in college and in life are of first priority and as a learning team, we will work together to relate your findings about yourself, your attitudes toward learning, and your reading skills to areas beyond this class

Reading improvement philosophy needs to be eclectic in this program. Use whatever will work with this student, whether it be SQ3R, phonics, Language Experience Approach, ITA, words in color, or handing out M&M's for each small success. Many students will have previously experienced various special reading classes and are understandably jaundiced about using the same old techniques again. Combination of different ways of attempting reading improvement with the change in attitudes and mental set is of major importance. This can be done with no equipment other than dictionaries, newspapers, magazines, and paperbacks (the latter 3 may be scrounged from friends, relatives, and the class), or it may be done with the latest technological equipment and shelves of sequential reading improvement exercises.

## OBJECTIVES

Attitudinal: Four basic attitudinal objectives have been derived from Krathwohl's Handbook II, Affective Domain of the Taxonomy of Educational Objectives (2), In this program, they are sequentially stated as part of the contracts: Practice

Contract (for Units 1 and 2 which are concerned with assessment of entering behavior and orientation): Contract A (Units 3-12 concerned with assessment of study skills and practice in improving reading and self-understanding skills) Contract B (Units 13-22) concerned with assessment and improvement of skills in test-taking and writing research papers): and Contract C (Units 23-32 concerned with assessment and development of ability to transfer self-understanding and reading skills to other areas of the student's present and future. They are stated:

> Attitudinal Objective #A-1-Awareness. Given explanation of the effect of attitudes on learning, the student shall demonstrate that he is willing to give his attention by listening, following directions, and grasping main points in Units 1 and 2.
>
> Attitudinal Objective #A-2-Awareness and Interest. Given activities, reading materials, and exercises, the student shall demonstrate that he is willing to give his attention and desires to learn more about it by participating in activities, selecting from options, and choosing his own order of practice in Contract A
>
> Attitudinal Objective #B-1-Awareness, Interest, and Relating. Given activities, reading materials, and exercises in Contract B, the student shall demonstrate that he is willing to give his attention, desires to learn more about it, and relates new information to other attitudes he already has by identifying, comparing, and contrasting attitudes he learns about with his own.
>
> Attitudinal Objective #C-1-Awareness, Interest, Relating, and Using. Given activities, reading materials, and exercises in Contract C, the student shall demonstrate that he is willing to give his attention, desires to learn more about it, relates new information to his own attitudes, and uses the new information in his outlook on life by showing openmindedness or identification with beliefs and attitudes discussed.

Performance. Performance objectives for development of reading skills should be devised ahead of time, in relation to the probable variety of needs in the class. They should state (1) the skill and kind of training or practice the student will have; (2) what the student will do to demonstrate that he has learned the skill; and (3) under what circumstances and to what standard the student must perform. Some examples are:

A. Given: a chapter from a freshman world civilization textbook students who fail to select main ideas and supporting details with 60% accuracy or better

Shall: after 2 weeks training in locating main ideas

and supporting details,
. . .distinguish between main ideas and supporting details
. . .in another chapter of the same textbook
. . .with 80% or better accuracy

B. Given: a list of words frequently used in first-year psychology students who fail to identify the meanings from a list of alternates with 60% or better accuracy

SHALL: after 2 weeks training in learning and remembering definitions
. . .identify correct meanings from a list of alternatives
. . .with 90% accuracy or better

Some kinds of reading skills for which performance objectives usually need to be developed include main ideas, important details, vocabulary, inference, sequence, cause & effect, comparison & contrast, cloze procedure, author's purpose, antecedents, predicting outcomes, fact & opinion, making generalizations, drawing conclusions, and improving reading rate on various kinds of material.

## SOME TECHNIQUES

Vocabulary. In this program, it is essential that word study be related to the needs of the individual student. Word lists, developed by the student from his reading, his other classes, conversation, TV, and other exposure to the language, have proved to be of much greater value than any predetermined or canned word lists, both in motivation and carryover. Instructors unaccustomed to individualizing may be dismayed by this suggestion, so one method is included in this paper. (Warning - don't refer to this as "vocabulary," a word which carries no meaning or relevance to most students. Something as simple as "word practice" is better.)

1. Ask students to bring 3 or more new words to class each time they come. Emphasize that these are not to be esoteric words, but words relevant to themselves and chosen because they don't know them and need them, can't pronounce them, know them only vaguely and can't put the meaning into words, or are familiar words used in an unfamiliar context.

2. Teach students to use a card file for their words, and to write the word in large clear letters on the card, with pronunciation clues and meaning below; then to use the Fernald (2) method of saying, tracing, and writing to learn pronunciation, instant sight-reading of the word, and its meaning. This is usually different from the word-analysis vocabulary study methods they have had unsuccessfully before, secures student interest with the "scientific" explanation of hand-eye-ear-brain

impact of practice, and the overlearning has greater carryover and retention than most traditional word study.

3. Check individual students at least once every 2 weeks, in the first 5 minutes of each conference you have with them. (See sample form). If the student reads the word at sight, pronouncing it correctly and giving the meaning in his own words, mark a + after the word. If any of these factors are not correct, mark it with a minus. When any word has 3 successive plusses, it is presumed learned and the student drops it from his practice list.

Conferences. Conferences usually begin by having the student read the words on his Word List and give the definitions, as the instructor checks them off. This structured beginning allows students to come to conferences without the implication that the conference is only for people with problems. In addition, it gives him a familiar situation to start the conference with and usually serves to help students become comfortable in the situation. There is no haggling over words - if they're right, fine, and if they're not correct, the student simply keeps them for further practice.

Following the word check, discussion will vary with the student. Some students may want to go over their practice materials to get help or discuss answers. Others sometimes want to talk about subjects brought up in Buzz Sessions, Role Playing, Communication Papers, or their reading. Some may have problems related to other classes or to their personal lives which they wish to discuss. In these cases, the instructor can be helpful as a sounding board, to allow the student to express his feelings, help him clarify his thinking about the problem and possible options, and to suggest referrals.

Of vital importance to the success of the conference in this program is that it serves as a warm, friendly time of personal undivided attention and interest in the student, with strongly supportive overtones. At no time should sarcasm, disparagement, or disappointment in the Student's progress be evidenced through words or body language (the latter often communicates more to these students than anything you say). The instructor's role as a member of the learning team with the student and as a resource when the student asks for help should be kept in mind. No conference should end without some personal commendation, even if the only possible subject is the fact that the student came to class, has good manners or a pleasant smile, is wearing a pretty color, etc. But it must be sincere. Everybody's got something going for him! As an instructor in a counseling/reading program, it's your job to discover something each person can be praised and appreciated for, each time you meet in conference.

## CONCLUSION

Subjective student reactions, although they lack prec ion and reflect feeling rather than measurable facts, may said to be of some value. Seventy-three percent of studen in the program reported carryover of reading skills to ot college courses; eighty-nine percent mentioned better und standing of themselves, their reading problems, and study habits; and ninety-five percent felt that the vocabulary study based on each student's own word list had been of n ticeable help.

Improvement of self-concept and changes in reading be havior such as modification of hostile and resentful atti tudes towards authors and books, increase of experiential background in reading, increase of voluntary reading, dev ment of interest in words and their meanings, and improve ment in ability to express ideas in writing and to write organized paragraph were observed with significant freque These changes were also reported by the students in almos every case.

Preplanning, with assessment of probable population; pected reading and attitudinal problems; arrangement of a able material in relation to those problems and readabili levels; and development of a series of performance object detailing the pretest, the learning opportunities and mat erials, and the level of performance required for moving the next step can be utilized to make this suggested coun seling approach to improvement of reading at the college level usable with developmental as well as remedial students, whether ESL, economically deprived, culturally dif ferent, or WASP.

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# IMPROVING THE SILENCE: EDITOR, REBEL, APOLOGIST

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Recently, one of my editorial advisors sent me a New England adage as her reason for not having responded to several requests I had made. The advice: "Don't speak unless you are sure it will improve the silence."

For both editor and teacher, that advice holds countless hazards if not outright frustration. Some of us seem determined to make up for quality by outshouting ourselves so continually that we are bound to improve something somewhere in the verbal barrage. This is the overkill of caring enough to send more than enough, but not caring enough to be sure we are sending the very best.

In recent years, I find myself playing one of three roles when I decide to break the silence. The roles are either editor, or rebel, or apologist. Let us consider the three roles.

## THE APOLOGIST

As an apologist for American education, I feel like one of the tormented in the Old Testament or in a Shakespearean tragedy, bayed about by enemies and fighting back as a puny voice crying in the wilderness. It is far easier to play the rebel.

Yet, there are moments of truth and small triumph for the apologist. Several weeks ago, my fifth grade son fumed his way through a homework assignment, busy work assigned to a group called a class rather than instruction geared to individual learners. As he turned in for the night, an hour or so later, he wanted to know what good was school and why I had compelled him to finish the homework assignment. He probably suspected the truth: that I could not and would not defend the particular assignment however typical it might be of homework assignments. So, I gave the most honest answer I could: "Your mother and I have devoted our entire lives to education; it must be worth something in our minds."

Society apparently believes in education. It looks to it for the solution of nearly every problem that comes along. It seems to blame all its problems on what education has not accomplished and that fixing of responsibility is a backhanded statement of belief in the power and goodness of education. Almost none of the critics of education would destroy it; instead, they would improve it, usually after some image of their own.

As apologists for formal education, we must remember that most of our sorest problems are the result of the collision of high expectations and insufficient support. There are simply too many demands and too few dollars brought to schools and colleges. In my first year or two of teaching, I used to tell my students, "All I want you to know is everything!" I scarcely believed that such an expectation could be met. Today, however, it seems that society now brings this impossible request to the schools. If we can overcome the shock of magnitude, we can recognize that it is a magnificent compliment society pays us in making the request. Unfortunately, we are to meet the challenge while simultaneously lowering taxes and tuition.

There are other sources of pride for the educator. As educators interested particularly in reading, we can look with pleasure at what has been accomplished in the high degree of literacy in American society. Of course there are too many people who are functionally illiterate, however illiteracy is defined. Yet, we have reached a point as a civilization where society has become dependent on literacy, and if such dependence is not a sign that a practice has arrived, nothing is. The Right to Read Effort--an attempt to guarantee literacy for every citizen in a society of 210 million--not only would have been unimaginable in the Europe of one thousand years ago, but such an effort would have been unnecessary for the functioning of society and an individual's participation in that society. Now, reading is seen as a skill vital to the proper functioning of society and necessary to an individual's constructive participation in that society. Universal literacy now stands as a feasible goal to be attained by the end of this decade. What more eloquent apology for reading instruction can we offer?

Perhaps the strongest position that the educational apologist can take is to point out that we are trying, within the field, to meet all challenges. It is educators, by and large, who call for and initiate most school innovations; rarely do laymen suggest alternatives in educational structure and program. Most laymen have only a meager sense of direction that they can recommend to the schools. They offer at best a pervasive, vague discontent. Politicians know next to nothing about educational improvement. To bus or not to bus? That is typical of their big questions, when those of us in education see inferior programs at both ends of the busline.

Finally, as an educational apologist, I like to point to open admissions on certain college and junior college campuses as one of the most noble steps a society can take. Open admissions is a practice that extends the concept that education is a continuous lifelong process. If only we can compromise the strict dichotomy that often distinguishes between the teaching role and the learning role!

So, apologist, stand up and be counted! We face ponderous problems, impossible limitations, boundless hope, and finite energies. We have survived until now; let us prevail in the future.

## THE REBEL

The rebel within me sneaks onstage and sticks out his tongue with the finest Bronx cheer that he can muster. Or, to put it poetically, as in Robert Frost's poem, "Mending Wall," "Spring is the mischief in me . . . Something there is that doesn't love a wall." The rebel within me welcomes some of the complaints and criticisms bombarding the citadels of the educational establishment. I hear of kids boycotting a boring lecture or compromising an isolated educational incompetent or hypocrite, and I keep a noncommittal look on my face for the sake of professional manners. But behind the mask I'm hissing, "Serves you right, Teach! Shut your boring yap. Don't come crying to me. I wouldn't have my kids in your school, but I'm compelled by law to send them. I don't have time, money, or energy to fight the legal battles. I just don't have courage or indiscretion or inclination enough to toss out the whole system and man the barricades!"

I am not entirely dissatisfied in playing the rebel because too often educators have failed to seize the moment and meet the challenge. Too many of us are refueling and refining when we should be reforming. We go to conferences, or take in-service credits, or sit through innumerable faculty seminars, committee meetings, or consultant programs. The basic assumption of the educational refueler is that everything we are doing is fine; it is the kids and the materials that lead to failure.

The refiner begins with a similar assumption, but he makes a slightly more sincere attempt to "do something about it." He believes that what we are doing now is basically right; we are just not doing it well enough. He would refurbish the present bag of tricks, popping candy into the mouths of preadolescents, transistor radios into the hands of high schoolers, fun and games to college kids, and promises of better jobs to adults. He rewrites Hamlet in the vernacular of the Now Generation and presents it in the nude. He decides to take the Nelson-Denny himself and urges his colleagues to do the same. He rediscovers Thorndike and Dewey and says, "Wow! This is where it's at!" He forces his students to go to a group sensitivity session so they can discover their separate individualities as free spirits.

The reformer ranges more widely and plunges more deeply than either the refiner or refueler. The educational reformer knows that no single innovative idea or practice is worth very much if it does not alter at least all three elements of the local educational program: its organization or setting; its curriculum or substance; its mean or behavior. Dwight Allen, at the University of Massachusetts, calls this the principle of reform the hourglass effect. Briefly stated, one can change curriculum and try the most flexible structures imaginable--in scheduling, grouping, staffing, context, setting. But if the teaching and learning behaviors used in the "new" program are simply carryovers from the old program, the output of the educational innovation can be expected to remain bound to the limits of that element that has changed least. The same principle holds if one attempts radical alteration of organizational structure and teaching-learning behaviors without corresponding changes in curriculum.

Failure to recognize this principle and its effects probably accounts for the typical lag of at least half a century between the proposal of an educational innovation and its implementation. The rebel, no matter what his personal motivation or his complaint, serves to shake any complacency we might have about the educational enterprise. If his energy leads to reform, it is all the more welcome.

### THE EDITOR

Let us consider the role of editor. There are many ways to look at the editor's role. The editor can serve at least four purposes through the journal he edits. He can provide a unified voice for the profession he serves; he can stimulate and continue professional dialogue; he can maintain and use a process of selection; and serve as an evangelist. In carrying out these four responsibilities, he can accommodate and encourage the best interests of both the apologist and the rebel in education.

The peculiar challenge in providing a unified voice for a profession--especially a profession so diversified as reading--is to bring synthesis out of diversity. If statements of synthesis and unity are not coupled with an ongoing record of heated conversation between protagonist and antagonist within and without the professional arena, the unified voice will become either so foggy as to be meaningless or so bland as to be sterile. Thus, it is the editor's role to seek divergence and bring it into dialogue, to encourage voices from every side of an issue.

To serve either goal--unity or diversity--the editor needs a process of selection, a procedure by which all voices can be identified, heard clearly, interpreted fairly, evaluated, and channeled into publication, modification or rejection. There is neither world enough nor time, page space nor need, to guarantee every voice its full hour or two or three its owner thinks it ought to have.

Finally, there is the undeniable editorial role of evangelist--one who tries to make sure, on behalf of the profession, that all of us care enough to send our very best. A journal is in a position of leadership. If the journal offers nothing new, it should probably go out of print. W. H. Auden said that any issue of any periodical should annoy at least one-fifth of its audience. An evangelist always annoys someone, or he is not an evangelist.

## THE EDUCATOR

These four editorial purposes allow the educator to be apologist and rebel, refueler, refiner and reformer, mirror and resource within the educational enterprise. Translated into classroom terms, the role of unifier means that one can strive to be master of all approaches to reading and a proponent of all. An educator can gain through dialogue--dialogue with students, with colleagues, with the world, with one's self. He can and should equip himself with appropriate criteria and effective skills from which to select the many thrusts, materials, and means that clamor for his attention and devotion. Once equipped--or evermore re-equipping--the educator is seen at least by students as the evangelist for a cause they might hear nowhere else. As Albert Schweitzer said, "Example is not the best way; it is the only way."

Editor or teacher, reading specialist, inveterate reader, or passing stranger--we must continue in the faith that whatever we are doing, we are improving the silence, or at least shaping the noise. The apologist can improve the silence by consolidating gains, the rebel by pinpointing problems, the editor by encouraging both and helping them reconcile their differences. By that paradigm stirs a dynamic structure within the profession.

# THE CONCEPTUAL COMPONENT OF SPEED READING—A THEORETICAL APPROACH

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This paper will discuss the intrinsic and extrinsic factors that underlie effective skimming and describe one possible model for understanding high speed reading or skimming. This literary model (which is more appropriate for describing mature reading processes), is contrasted with the traditional linguistic model. It is our contention that only through examining the mental processes involved in skimming can we begin to understand the skills involved and develop adequate strategies for teaching them.

If we consider Sir Francis Bacon's oft quoted description of reading, "Some books are to be nibbled, others are to be swallowed whole and only a few are to be thoroughly chewed and digested," perhaps we can put skimming and scanning in its proper perspective. We can make an analogy between books "that are to be nibbled" with the term, browsing (a type of reading that everyone understands, but no one has researched.) In this instance, the individual may open a book and thumb through it and read a few phrases or passages here and there. Usually his purpose is to see what it contains, and perhaps he has no more clearly formulated goal. Skimming can be compared to "swallowing a book whole." Technically, reading specialists usually define skimming as "getting the gist of a book or an article, recognizing the author's structure, or attempting to quickly determine the main idea." The term scanning is usually defined as looking for specific bits of information - such as dates, or verification of a quotation or locating information about a specific topic. Skimming, however, involves selective reading at a very high speed. There is some agreement that skimming is a higher level skill indulged in mainly by highly educated people - college students, professors, and other professionals who are faced with screening the vast amount of written material in their particular fields. It is doubtful that the average person needs to know how to skim. However, skimming has become a necessary survival skill for most college undergraduate and graduate students. At Berkeley, students, particularly those in social science and humanities courses, are faced with literally endless reading assignments. It is not unusual for a professor to assign several hundred pages of reading per night per course. A student in library science several years ago calculated that if a student with an average reading rate read all of the assigned materials in his library science courses it would take him thirty hours a day. Even at Berkeley, no scientist has yet discovered how to stretch the twenty-four hour day to thirty hours.

We contend that speed reading or reading above 800 words a minute should be termed skimming. It is impossible for the human eye to fixate on all of the words in a passage at high reading speeds. The reader must skip, fixate selectively, and sample. Neisser (4) termed mature reading "externally guided thinking" and described it "as impossible in theory as it is common in practice." Hochberg (1) calls mature reading "cognitive search guidance" and "open-ended expectancy testing." He suggests that the reader behaves as if he has hypotheses, makes fewer fixations, longer eye-movements, and mentally treats each important clue as confirmation of or rejection of the expected. Hochberg further states that it is more difficult visually to make small systematic saccadic movements; therefore one must sample the material. It apparently takes more effort and therefore greater motivation to focus on each word and mentally process it.

Maxwell's (3) recent work on the cognitive aspects of skimming involves a three-stage analysis of the comprehension process termed skapa: selecting word clues, labeling or categorizing them and synthesizing the main idea from the labels. This work supports the idea that skimming is a type of inductive thinking involving the creation of concepts from minimal word clues (e.g., by selecting as few as 2-3 words per paragraph.)

## FACTORS UNDERLYING EFFECTIVE SKIMMING

Effective skimming involves an interaction between extrinsic and intrinsic factors which affect the reader's ability to set sequential hypotheses to test (See Figure 1). Mismatches at any of the points can lower the reader's efficiency and accuracy of comprehension or make his task more difficult.

## EXTRINSIC FACTORS

The characteristics of written material can be considered as varying on a continuum - either on amount or difficulty level. Under these characteristics we perceive two major divisions: those characteristics which are the author's own idiosyncratic style and structure vs. those characteristics that are typical of a given content field. For example, there is an accepted style of writing and organizational structure in psychological studies that differs from technical articles in history or even anthropology. In writing books, even within the same subject areas, authors may use varying organizational patterns and styles. For example, one obvious kind of writing convention involves organizing and presenting material from the conclusion to the proposition. This is analogous to the exertation in Freshmen English to "tell them what you're going to say, tell them, and tell them again." Another organizational pattern leads from the proposition to the conclusion. This might be described as the "let me take you by the hand and lead you through the labyrinth of my mind as we discover together where I am heading" approach. The latter technique of writing presupposes that the student is motivated to follow the meanderings of the author's mind or is compelled by some external demand to do so.

Redundancy - either semantic or syntactical or both - is essential to skimming. A non-redundant mathematical formula cannot be skimmed, although it is possible that it can be instantly recognized assuming that the reader has had considerable experience with it.

## INTRINSIC FACTORS

Characteristics of the reader including his general experiential background and knowledge in the field as well as his general verbal skills, learning style, interests, etc., affect his efficiency in skimming. If he lacks the appropriate frame of reference or does not understand the thinking paradigm of the author or subject, he will not be able to formulate appropriate hypotheses and will have difficulty in skimming.

## NEED FOR A DIFFERENT THEORETICAL MODEL TO EXPLAIN SKIMMING

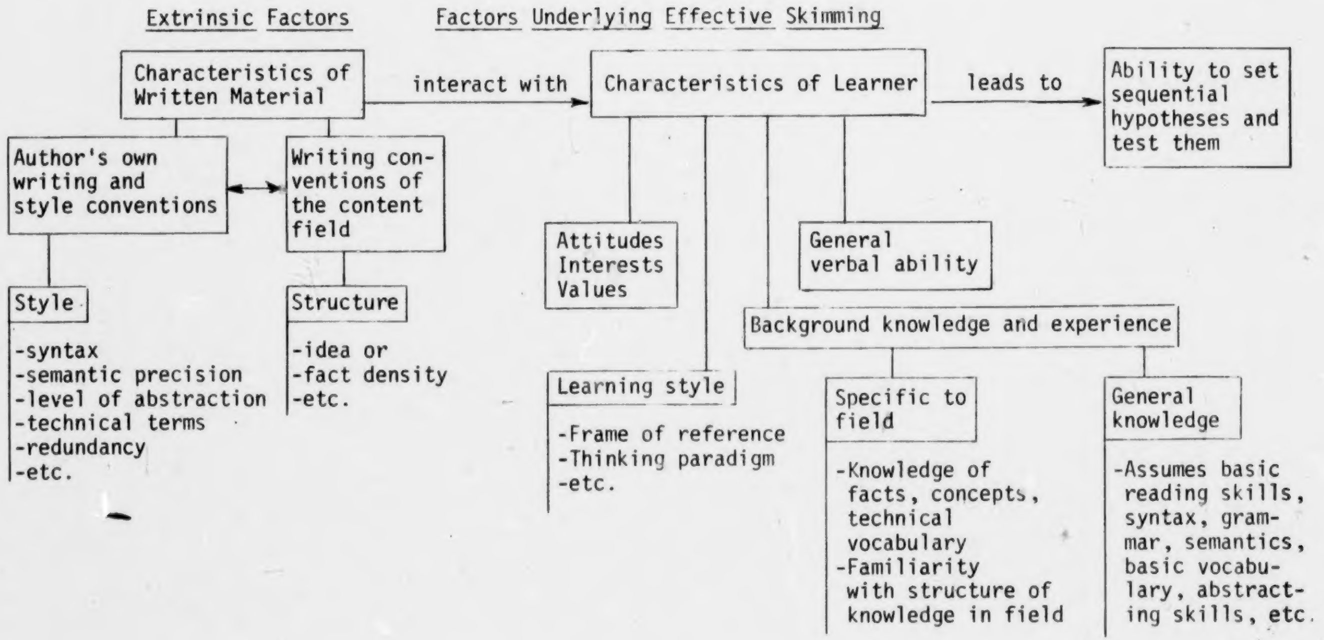
Since effective skimming skills involve the recognition of writing patterns and structure of different subjects, the traditional linguistic models are not sufficient to explain the complexities of the cognitive aspects of skimming. Linguistic theory is most appropriate in understanding the development of early reading skills, but has minimal implications for mature reading. Mature reading and skimming presupposes an adequate linguistic background and an understanding of the phonological, syntactical, and semantic conventions of the English language but represents a higher order of intellectual process. Skimming requires the reader to reason inductively from a few clue words, recognize patterns, and synthesize or recreate the author's ideas.

Writing conventions and organizational structure vary from discipline to discipline. Much philosophical writing might be considered linear in organization as contrasted with literature which involves more complex, interactive patterns.

A model such as that proposed by Hrushovsky (2) for describing literary patterns can aid in explaining the skimming process. Other models are needed for understanding skimming in other disciplines.

FIGURE 1

Factors Underlying Effective Skimming


Extrinsic Factors
Characteristics of Written Material
interact with
Characteristics of Learner
leads to
Ability to set sequential hypotheses and test them
Author's own writing and style conventions
Writing conventions of the content field
Style
-syntax
-semantic precision
-level of abstraction
-technical terms
-redundancy
-etc.
Structure
-idea or
-fact density
-etc.
Attitudes Interests Values
Learning style
-Frame of reference
-Thinking paradigm
-etc.
General verbal ability
Background knowledge and experience
Specific to field
-Knowledge of facts, concepts, technical vocabulary
-Familiarity with structure of knowledge in field
General knowledge
-Assumes basic reading skills, syntax, grammar, semantics, basic vocabulary, abstracting skills, etc.

Hrushovsky (2) contrasts the units of analysis and methods used by traditional linguists and literary scholars. He states that the traditonal linguist is concerned with small, discreet units of measurement such as phonemes, graphemes, and sentences. while the literary scholar focuses on large units such as novels, plays, etc. In traditional linguistics, the test is exhausted by the description (e.g., all sounds belong to phonology, or syntactic relations account for all elements in a paragraph). In literature, patterns are not exhaustive but are combined to form heterogeneous elements (e.g., only certain words rhyme in a poem). Linguistic elements are viewed as continuous, while literature is comprised of discontinuous, overlapping elements. A novel contains not only events that are relevant to the plot but also elements which are not essential, i.e., accidental or neutral events. Linguistic units are finite, stable, and relatively static, while literature involves a dynamic model, i.e., a novel elicits fluid, interwoven, changing impressions. The linguist often studies units out of context (sentences or paragraphs), while the literary scholar studies lengthy, complex texts where units cannot be separated from context.

To the linguist, a good reader is one who has knowledge of the phonological, syntactical, lexical, and semantic characteristics of the language. Traditional linguists stress literal interpretation. Literary scholars define the good reader as one who attends to and recognizes literary patterns, knows literary conventions, and can integrate relevant, semantic elements (e.g., metaphors, symbols, etc.).

## CONCLUSION

Skimming (considered as synonymous with high speed reading) involves higher order rapid mental processing of redundant material. The effective skimmer understands the writing conventions and thinking paradigm of the specific content material he is processing, sets sequential open hypotheses through an individualized sampling technique. Skimming is viewed as a type of inductive reasoning. A model of the factors both extrinsic (characteristics of the material) and intrinsic (characteristics of the reader) underlying effective skimming is described. Hrushovski's theory of literature is contrasted with traditonal linguistic theory and presented as one example of a possible model for understanding the conceptual processes of skimming.

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# COMMUNITY USE OF THE COLLEGE READING AND STUDY CENTER

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## ADULT PROGRAM

Three years ago we opened our Saturday program with an adult reading and study skills program only. In this program we give a very short pretest to establish a reading level and then show students how to go to work independently and individually on whatever skill they want to work on. Over the years we have mini-packaged several separate skills to more highly individualize the learning process. When students need or want help, they ask for it. The silent ones still throw out clues for help if we are watching. When there is time, tutors set up tachistoscopic, motility, or controlled reader demonstrations or training sessions for anyone who wants to sit in. Individually, they demonstrate other kits, activities, or machines in which someone shows an interest or need. We recommend devices, but do not require. More advanced tutors have learned how to give the telebinocular survey to test functional vision, a screening afforded both adults and children. I do the adult or parent conferences afterward on those surveys that indicate the need for professional checking.

Adults come to the Study Center for many reasons. Some have just found out we exist. Some want to take a college class but don't start early enough in a semester to be allowed to enroll. Some have job advancement exams coming up and want "shot-gun" magical courses. Some are getting ready to go back to college after a long time away. Some are four-year college students who need help in study and reading skills but do not have a reading/study lab on their own campus. Some professional people want to learn how to skim to keep up with the current advances in their fields. Some are people for whom English is still a foreign language.

Many who come in for a single purpose wind up in a college reading course the next semester and probably do better because of the headstart. Some college students come in periodically for special help on Saturdays--making up tests, catching up on lab work, or for other reasons--often bringing in a youngster from their family or neighborhood who needs help, sometimes a neighborhood carload. A few rehabilitation cases come in, such as those who have had brain surgery, concussions, or strokes. We accept these if a member of the family is willing to do the needed one-to-one tutoring involved. Results are slow but possible and usually positive.

## CHILDREN'S PROGRAM

Three years ago, a few weeks after we started, one of my reading class tutors asked if she could bring in some elementary school children she was tutoring to let them use our facilities. From this small start grew the idea of opening our second room to children if their parents would come to serve as a volunteer staff to learn to help children and handle discipline. This would expand our college tutor staff enough to try out the elementary program. The group rapidly rose to about 35 children in the first year, 75 the second year, 145 for summer school in 1971, and over 100 at present. We don't know when the interest will wear off; we do know we are out of room and have spilled over to the grass on both sides of our bungalow.

Nearly everyone goes through some phonics training. We started first with only a set of four records, flashcards and tachisto-flasher filmstrips. We have gradually added the SRA word game kit, the Hear-See-Say records and charts, some of the Open Court approach, the EDL Aud-X phonics and the MKM set of easy association sentences.

Some of the above sets (such as the Hear-See-Say, Open Court and Word Games) are more suitable for very young children, while other materials (such as the Aud-X, tachisto-flasher and MKM) work better for older children and adults. Some are good for review, such as the Bremmer-Davis records. For many parents the Aud-X program provides the first organized approach to phonics principles in their memory. This one provides a filmstrip and cassette, audio-synchronized with a workbook. Parents, adult students, and tutors put on extra earphones and enjoy this, learning while they supervise the children who are using the workbooks.

The Aud-X is one of the most successfully used instruments for the elementary age children. A tutor or parent can operate it. This is a part of the EDL Learning 100 program. We use it for all ages. For the small children it is a reinforcement for the more usual phonics approach which is also used. At the same time the adult functional illiterate, or ESL (foreign speaking) student, can stand behind the children without embarrassment with earphones on, hearing, seeing and seemingly supervising the children who write down their responses. A tutor stands by to answer any questions and watch for anyone needing help.

The SRA word games are very useful for grades 1-6 to reinforce and teach word attack skills and phonics. Much of the value in many of these approaches depends upon the ability of the volunteer or tutor to relate the theory to reading at the student's level.

Perceptual training is essential at every level and provides welcome variety with active participation. This includes some phonic consonant word blend practice on the tachisto-flasher. Motility training includes rapid recognition of pre-determined targets on a Controlled Reader using a series of filmstrips in which a specific target is looked for among many others, with the student counting the number of A's or 2's or curves, etc., by scanning lines of scrambled symbols that are moving at a pre-set rate. The tutor has a key and the children chart their answers for each set as they go along.

This practice sharpens the concentrated looking at the material for details which paves the way for accurately seeing all parts of a word. It breaks down the generalized glance at shapes of words which the original sight approach over-employed. Perceptual training also includes practice in eye-tracking, which involves far to near focus and ability to follow a fast-moving object, locating the body in space. Many people cannot accurately do some of the commonest body balancing and/or cross-body movement patterns, which all seem to affect the ability to read and learn more efficiently.

More attention is gradually being paid across the country to this kind of learning as the results seem to justify the time involved. The activities seem simple and can be reduced to simple playtime unless carefully supervised. While this is largely experimental with us as yet, we are trying to train each volunteer in a few activities with definite skills to teach and scores to keep to show progress or problems. We are starting with "Tootie" bags which are filled with light crystals. They are 2" x 4" in size and are thrown against a throw-back nylon net, "launched" from a special board, or tossed up and down from a small hand net. Even if nothing more is accomplished than a short exciting break away from reading training, this activity would be worthwhile. Beyond this, it involves the development of ability to keep the eye focused on a moving object, a task which many children have not learned to do with gross movements. It is no wonder reading is so hard for many. It is a sure way to break down very withdrawn or shy children. It reduces the overactive child so that he quiets down to the point of being able to concentrate on reading. It encourages binocularity in seeing. It seems to have many possibilities. As with other approaches, it will find its proper place as we learn more about it and watch results with many children.

We hope to be able to work in the more often used balance and jumping boards, Marsden balls, rotators, and stereo slides, if and when we can get someone to nurse these training activities along and keep track of results. We know from research that there are definitely important learning aids here that are slowly coming into education, but we still need special training in the use of these to accomplish the desired results.

Developing comprehension by reading stories is, of course, the backbone of the program on all levels, with individualized reading kits such as the SRA and Sullivan the most successfully used. We supplement these kits with some basic readers (which we treat as library books), other books that can be taken home to be read, Mast teaching machine programs, and anything else we can find. Tutors or volunteers most often work on a one-to-one or one-to-two basis with the elementary school children.

The stories are usually interesting; the constant comprehension check tests help the youngster organize and review the material he has just read; also help is at hand to help him find what he missed. The vocabulary part concerns the words in the story and provides excellent teaching material. Each child can work on his own level, at his own speed, with tutor help immediately at hand when needed. If we have the reluctant reader/avid player type, we require at least three reading articles completed before play-type activities are allowed. Enthusiastic, lavish praise from the staff for any success helps develop a feeling that the child wants repeated, so he tries even harder for more success.

New parents and tutors are given an initial explanation by the head tutor-teacher when it is possible to arrange. Staff meetings are called when there is a real need. From 10 to 12 we work hard with an Elementary Program, grades 1 to 6 in one room and high school and adult programs in the other classroom. Between 12 and 1, we put things back in order, do minor chores, and get ready for the afternoon. Most of us eat lunch on the run. From 1 to 2:30, we work with grades K to 4. From 2:30 - 4, we work with grades 5 - 8. Fortunately, there are fewer adults in the afternoon as we need the entire staff for the elementary program. The two tutor-managers and I stay to close up at about 5; then I have the only few quiet hours of the week, alone, to think of things past and future before closing the center for the week.

In a small workroom, from 10 - 4, our Saturday office staff mans typewriters, scissors, ditto machine, mending tape, etc., to provide the very necessary back-up team to keep the lab functioning. They also pinch-hit as tutors when we get overwhelmed with a sudden rush of children. When things get really rough, the staff have been known to work around the clock in order to meet an important deadline.

There are two other elementary programs I haven't talked about yet. One works concurrently with our 10 - 12 a.m. program. This takes in children from 1st - 6th grade. It started out as a coordinate program with our local YMCA. We furnished the center and material, while the YMCA paid two college reading tutors to go to a church near an elementary school twice a week after school to work with elementary children who were behind in reading. This program continues now in two areas. On Saturdays the children come to the Center for two hours. The Y charges for this ten-week course in order to pay the tutors' salaries. The charge averages 80¢ per hour. They operate this program twice during the school year. The intervening weeks, the Y tutors work for us. On all Saturdays we use the class for an overflow outlet. We are at present handling from 25 to 35 children in each of the three classes.

The second program began last summer. We had so many requests in the spring that we planned to work (1) with an elementary class of 35 in grades 5 to 8 for eight hours per week for six weeks, and (2) with adults who wished to work independently. On the first day 145 showed up for the 35 elementary seats and only a few came for the adult session. We ended with four classes: K - 1, 2 - 4, 5 - 8, and 9 up, working from 8 - 12:30. With the staff spread thin and given more than expected responsibility, we managed with plenty of parent volunteers and experienced a vital, live, exciting experience.

Our current staff consists of the following:

1 Over-all Director
2 Student Managers, who work each 10 hours per week
14 Paid Tutors (mostly college students) who work from 2 to 6 hours on Saturdays
1 YMCA Reading Teacher, paid mostly by the YMCA, and

Volunteers, including:

1 Elementary principal of a private school
1 Intern teacher
4 Graduate Education students, who are reading majors
30 Parents
3 Scout leaders
1 Probation officer
2 Social workers
Several visiting elementary and high school teachers, who bring some of their own students with special problems in to work with them.

Whatever the reason, reading activities such as we are using seem to liven the process of learning the difficult steps of reading. The feedback from the classroom teachers, parents, and children makes us think we are on the right track. The steady increase in the number of children who come each Saturday makes us realize the tremendous need for a community reading service.

Several elementary and high schools have sent students, then faculty members, then administrators over to visit. Afterwards, in a few months we hear that they have, or are going to have, a specialized reading room in their plant to work with these newer individualized approaches.

Using the College Reading Center as a research center for education is one kind of community leadership sorely needed in most urban neighborhoods. It is highly satisfying and interesting work. It is a fairly new area for the community college reading and study center. There are many problems to be solved, but we can learn from teaching small youngsters the steps in reading and thinking, and we can apply what we learn to help college students with their multi-varied reading and study problems. We feel that it is an exciting learning opportunity for everyone.

# READING:
# REPROACH AND RAPPROCHE

**John R. Nicklin**
Los Angeles Pierce College

Compared to the world around the children and youth of today, the education process day by day is a dull, unchallenging, irrelevant program forced on them without much participatory in-put from them. The reading programs are based on such awareness. You who operate reading clinics, reading laboratories, and reading improvement programs are trained psychologists or reading specialists who understand motivation, reinforcement and utilize the devices produced by the technology to help turn on the youth and adults who can't read and comprehend at a level acceptable for successful college work.

The open door to the California community colleges invites and encourages every graduate of the high schools and everyone else over 18 to enter for an opportunity to participate in a higher educational experience directed to any number of goals, but mostly to satisfy a sense of lack of status for not having a degree from a "college." And thus, the emphasis is pretty much on the same old stuff. The door is open, but what is behind the door is pretty much the same kind of services and the attitudes and operations found in so many high schools and from which many turned off long ago.

The testing program is not as effective as it should be because there isn't the time or personnel to do much follow-up and counseling. The revelations from whatever entrance testing occurs is usually barrier-creating. The student must take English 21 or English 30 because he is not eligible for English 1, the regular first college course in English. He must take Math 20 or Math 30 because he can't go into the regular college programs of Math 3 or Math 4 or Math 7. Unfortunately, the English and math programs are largely structured in classroom-type situations, geared to the lecture method, and with few or no support programs for individualized help. The English reading clinics brought about a refreshing change. Further, there is considerable recognition of their effectiveness as evidenced by math labs, writing clinics, etc.

The very rapid development of generalized learning centers with the use of video and audio support is also encouraging.

The vast majority of teachers in the community colleges today are products of the traditional sort of educational experience, in which they were generally successful, academically-oriented, and engrossed both subject matter minutiae and highly sophisticated verbal learning. How do we make them aware of the needs of individual students and the techniques to aid their learning?

Unfortunately, the public seems to be disenchanted with the results of public education today. The reasons are myriad. Some justification can be made for that disenchantment. Maybe we can look on the public pressure as a blessing in disguise. For, indeed, one consequence of the exposure to public scrutiny is that evaluation is now upon us all. Accountability is something that you, in the clinics, labs, and centers, consider every day with everyone with whom you deal. And so evaluation might be looked upon favorably. Every instructor will be forced to state what his objectives and goals are for each individual in his charge, how he proposes to achieve those goals, and finally to measure his success with respect to achieving them. Accountability, evaluation, success of the teaching process and individualization--is all that so bad?

Philosophically, I have wondered if we haven't gone off the track as colleges also. Our pre-tests have not really been geared to help the students so much as to group the inept and conveniently schedule so-called remedial programs to bring the students "up to standard." There is ample evidence that the failures far outweigh the successes in these programs, and yet we persist. I am all for testing, but for the purpose of determining the talents, interests, and capabilities of the students for the purpose of guiding them into those programs which they might like to try and for which they seem to have some aptitude. If and when the reading, or any other difficulty emerges, that is the time to set up special resources to help the student. The other method has failed for ten or twelve years. To continue to schedule the student in that mode on the assumption that the magic number of 18 years makes a difference is nonsense.

I decry the repetition of the failures from the lockstep scheduling we generally employ in our English scheduling: the 35-student classrooms, the one-teacher and a class within the four walls. No teacher ever taught a group; no group ever learned. Every student in a classroom is an individual with a specialized background of experiences and difficulties, with varying motivation, aspirations, abilities and goals.

The English laboratories, the study skills center, the reading labs, and all the other types of arrangements are the first vigorous steps being taken to treat with the individual's communications problems. The awareness and the concern with all the peripheral ingredients which effect that communications difficulty--the hearing, the emotional, the physiological--needs more support.

Identification of the problem is frequently complex. Punitive grading does not solve the problem. Many of the traditionalists in the profession and the most outspoken critics from the public do not seem to realize or accept that fact. Psychological reinforcement--success breeding success--making learning fun by building on satisfactions is a complex thing. It can be planned. You people are experts in this field. You recognize the personal touch. You recognize the power of the technology, as well as its weakness and inefficiencies. You recognize that you are only one person and that individualized instruction economically cannot be 1:1, but with the appropriate resources, the effective ratio can be a lot better than 35:1. Skills are built through practice, routine, and drill continuously remotivated by reinforcement and can be most effective when the student recognizes the need and has the desire to build these skills.

Federal funding is making some very great innovative differences. The constraints of current budgets in the local districts is discouraging. The problem now is not to lose the momentum and the enthusiasm of your group which can show the way to more effective instruction for the general faculty.

The notion that everyone can succeed to a reasonable degree in something is the only motto the teaching profession can adopt and cling to at the community college level. We are the teaching agency of higher education in which everyone is welcomed and should be assured of success in something. To continue to reject most of those who come in through the open door is suicidal in this age when measurable standards of performance are about to be imposed on the educational process and evaluation will be based on that performance. Efficiency of the use of public funds implies that the goal is 100% retention at some acceptable level of performance. That you require in each small block of work such performance is exemplary for all. CIS, the general multi-media assists, your specialized equipment and devices--are all based on the concept of complete understanding of one basic before the second is attempted or that the first is repeated at the time that its application in the second is obscured or twisted. The curve, the "D" grade, the 20 week semester, "getting by" all seem to lose any acceptable validity under this sort of evaluation that "one can either perform or he cannot--when he cannot, repeat the effort in a more meaningful way or redirect the effort in a new channel."

Implications are clear:

1. Quality education implies success and the ability of the student to perform at a pre-determined level.

2. Time frames must be re-evaluated.

3. The classroom and the ratio of teacher to student on that basis must be re-evaluated.

4. The monuments to education (as integral separate units in society) must be re-studied.

5. The community college must be just that--the maximum interaction of the agencies and resources in the community must be coordinated. Perhaps the open university concept can be offered here. ITV as it has been generally employed in education is a good example of the artificiality of employing a modern technology in the on-going educational process. We have "tacked it on," isolated it. We tend to build walls around our institutions.

6. The profession has to look as the "vested" interests which must be modified if we are to prevent the whole world from tumbling about our ears: tenure, without the flexibility of assignment, the manner of assignment--ADA, WSCH, 15 hours per week in the classroom, that the classroom responsibility is the sole concern of the teacher, etc.

Lest you think the monologue is totally negative, that the future is hopeless, that I am a dedicated pessimist, and decry the inability of the profession to get with it, let me emphasize the following:

1. This is the most dynamic period in educational history.

2. Never have so many changes been made as are being made now.

3. Not that change in itself is a criterion for good, but things have been happening in California in community colleges:

   a. Individuals are being looked at in regard to their abilities, and inabilities.

   b. Very exciting support is being given at various colleges, and every college is doing something.

   c. Students are being involved in their educational destiny, both at the philosophical and the practical planning levels.

   d. Faculties are concerned with effective instruction.

   e. And we are opposed to becoming research, publishing, four-year, exclusive clubs.

It is just that in an age of rapid change I feel we want the positive changes to come faster on a broader scale.

# A SYSTEMS APPROACH TO ESTABLISHING ACCOUNTABILITY IN THE COLLEGE READING PROGRAM

**Deborah K. Osen**
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It has become increasingly apparent that American higher education during the 1970's faces an era of accountability. Current writers (2, 4, 9) remind us that the educational dollar has become a rapidly diminishing commodity and its activities within the educational system are being watched with heightened interest by state legislators, the public in general, and college administrators in particular.

Described by many as a rather costly part of the school's curriculum, the college reading progam is coming under particularly close scrutiny. The purpose of this paper is to assist the specialist responsible for such a program by presenting a systems approach to establishing accountability in the college reading program.

## THE MODEL

According to Banathy (1), a systems approach is simply common sense by design. The system presented in this paper (Fig. 1) is a step-by-step method for developing and evaluating the total college reading program. This system, therefore, provides the means by which those responsible for the college reading program can demonstrate accountability for what they are trying to accomplish in that program.

This system is divided into four major phases: need assessment, program planning, program implementation, and program evaluation. Each phase grows out of the one which precedes it.

## NEEDS ASSESSMENT PHASE

Before the program planning specifics can be determined, a needs assessment must be completed. This assessment will help delineate the direction the entire reading program must take in order to succeed.

The first step in assessing needs is to determine what student needs and expectations for the reading program are.

By reviewing the assessment made of previous students entering the reading program, the college reading specialist can compile a list of student strengths and limitations related to their characteristics and capabilities. Additional information related to student reading needs can be obtained from representatives of the various departments on campus. In addition, the students themselves can be asked on a questionnaire or in an interview to identify their limitations in reading and their expectations in regard to the kind of help they hope to receive in the reading program.

Second, the reading specialist needs to assess the expectations which administrators, counselors, and faculty at the college hold for the reading program. This can be accomplished through interviews, questionnaires and a review of statements about the reading program in the college catalog and other official sources. If the reading specialist finds only a vague awareness of the program and its purposes, he will be alerted to the need for establishing a positive peer education program.

Third, the reading specialist needs to look over the inventory of all materials, equipment and facilities available for use in the college reading program. Special attention should be paid to material not currently in use, since some instructional aids, now stored or in disrepair, could be valuable additions to the college reading program.

Finally, the reading specialist can consult articles in the professional literature which describe other functioning college reading programs. Excellent sources for such reports include the conference proceedings of the Western College Reading Association, National Reading Conference, and the International Reading Association. These reports help the reading specialist see possible parameters for his program, as well as different models for reading programs which he might consider.

## PROGRAM PLANNING PHASE

After completing the needs assessment phase of this system, the reading specialist needs to consider the implications of his findings.

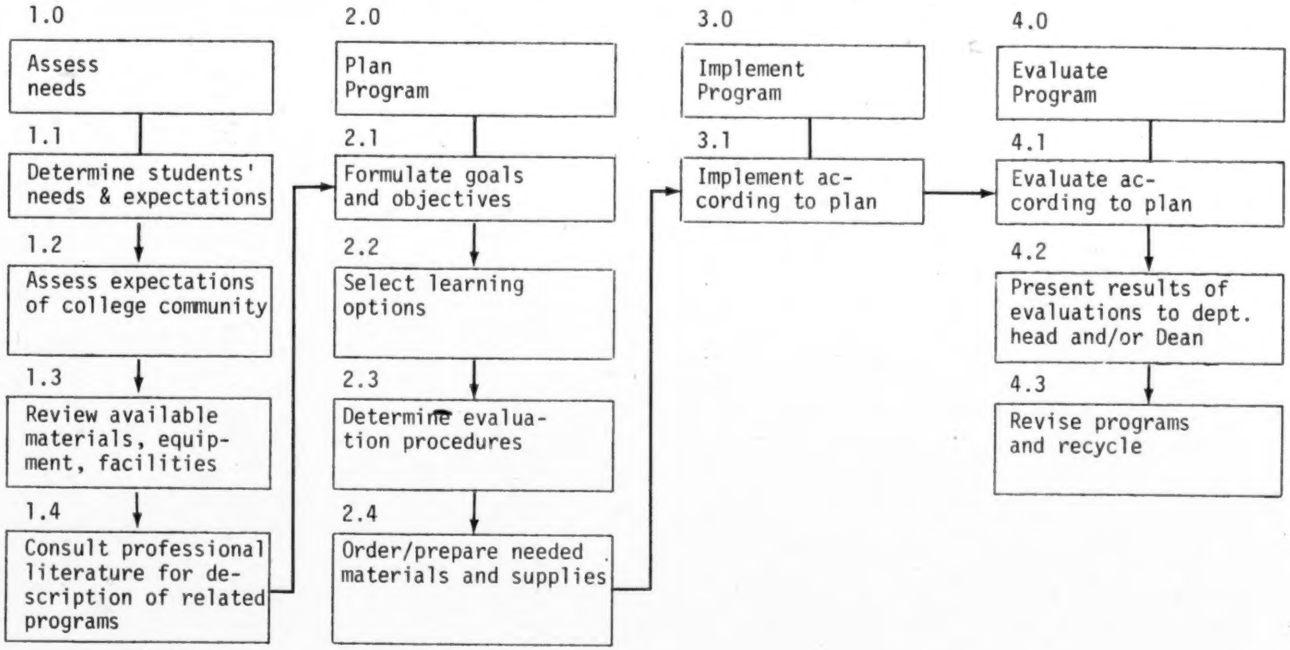
Rainwater (10, p. 26) suggests two assumptions about reading programs which are commonly held by students and college personnel:

(1) participation in a reading program results in improved reading;

(2) improved reading can be translated into better grades.

If the college reading specialist finds that similar assumptions are held by members of his college community, he will want to assure that his reading program goals reflect these assumptions.

FIGURE 1
A Systems Approach to Establishing
Accountability in the College Reading Program


1.0
Assess needs
1.1
Determine students' needs & expectations
1.2
Assess expectations of college community
1.3
Review available materials, equipment, facilities
1.4
Consult professional literature for description of related programs
2.0
Plan Program
2.1
Formulate goals and objectives
2.2
Select learning options
2.3
Determine evaluation procedures
2.4
Order/prepare needed materials and supplies
3.0
Implement Program
3.1
Implement according to plan
4.0
Evaluate Program
4.1
Evaluate according to plan
4.2
Present results of evaluations to dept. head and/or Dean
4.3
Revise programs and recycle

The assessment the reading specialist makes of the students' needs will yield information about establishing priorities. Which reading strengths need to be reinforced and which limitations in reading need concentrated work can thus be determined.

By reviewing his current materials, equipment, and facilities, the reading specialist can determine the feasibility of incorporating procedures from the reading programs he found in the professional literature. He can also determine priorities and rationale for the acquisition of additional supplies and facilities.

With the results of his needs assessment in mind, the reading specialist can launch the writing of goals and objectives for his program. The broad goals of his program can perhaps best be developed in a group, comprised of the reading faculty, paraprofessionals, and several students. Brainstorming or a Reduction-of-Agendas technique can be used to formulate goals which reflect input from the total group. Next, objectives should be written, outlining the steps by which the goals might be attained. The statement of related objectives should specify:

1. What the learner is expected to be able to do, by
   a. Using verbs that denote observable action.
   b. Indicating the stimulus that is to evoke the behavior of the learner.
   c. Specifying resources (objects) to be used by the learner and persons with whom the learner should interact.
2. How well the behavior is expected to be performed by identifying
   a. Accuracy or correctness of response.
   b. Response length, speed, rate, and so forth.
3. Under what circumstances the learner is expected to perform by specifying
   a. Physical or situational circumstances.
   b. Psychological conditions.

(1, p. 33-4)

Help in writing objectives in both cognitive and affective domains can be found in the pamphlet Developing and Writing Performance Objectives (3), as well as in the excellent Mager books (5, 6). WCRA members are urged to submit copies of their completed goals and objectives to the College Reading Instructional Objectives Depository at California State College, Fullerton's Institute for Reading. Sample goals and objectives in the depository are available to WCRA members from the Institute.

Next, the reading specialist needs to consider alternatives from which to select learning content, experiences, and resources required to achieve the selected goals and related objectives. The specialist then selects from these alternatives and plans the instructional program.

Third, the reading specialist needs to select and/or develop tests to measure the degree to which the learner has attained the objectives. The specialist needs to decide whether group survey or individual diagnostic tests will best suit his needs. Maxwell (7) suggests methods by which the assumptions listed by Rainwater (10) might be tested, as well as reviews types of test currently available. Metfessel and Michael (8) have developed an extensive list of formal and informal evaluation devices which are of help to reading specialists planning evaluation procedures.

Fourth, the reading specialist should order and/or prepare materials and supplies needed in his program, depending, of course, on budgetary and time limitations. If a current priority list of needed supplies and equipment is maintained, such ordering is made much easier. Furthermore, such a list will enable the reading specialist to take advantage of unexpected budgetary windfalls.

## PROGRAM IMPLEMENTATION PHASE

Throughout the program implementation phase, the reading specialist can monitor student progress toward the goals and objectives selected for the college reading program.

Using the procedures selected earlier, the reading specialist can then complete the final evaluation of the reading program.

The results of this evaluation can then be formulated into a list of strengths and limitations of the program based on student progress toward the goals and objectives. These results plus tentative plans for revision should then be presented to the appropriate department chairman and/or Dean as a progress report. The evaluation findings also provide valuable rationale for budget requests, since reading specialists can clearly demonstrate program needs based on student performance.

## CONCLUSIONS

The systems approach to establishing accountability in the college reading program which is presented in this paper can have two positive effects on such programs. First, it offers a powerful method for making decisions and developing instructional designs in the college reading program. Second, it may help bring about a clearer notion of what college reading is all about. It is perhaps this second application which will have the greatest long-range effect on the teaching of reading at the college level.

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# THE IMPLICATIONS AND USE OF DRAWING RESOURCES BY THE TEACHER OF READING

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In an earlier presentation the author analyzed original drawings of average and superior minded college students who nevertheless were poor readers. The evidence pointed to social and psychological factors as important contributing causes of the disability. The present effort focuses on the college teacher of reading and what can be done in the classroom with this clinical device.

## THEORY

Theoretically, drawings may show basic needs of the individual which would otherwise not be expressed or could not be procured in any other way. They may show movement, feelings, expression of face, of body, separation, incompleteness of form, disguised longings and repressions. As such, one's behavior and attitude in the class and toward reading may be revealed to the teacher.

It is known that the student is extroverting or introverting when he is asked to draw. The product is out of one's environmental experience or internal imaginings. And from these external/internal wells of energy the teacher comes into convenient possession of materials for the better understanding of the individual and the class.

The drawing will practically assure arousal of the student's interest, which is necessary for responding and reacting.

From the drawings and their appraisals the teacher is closer to getting the unusual combination of tying in arousal with attention, motivation, and learning.

## ADMINISTRATION AND USE

First, let it be clear that teachers and professors may use this approach and can do so without fear or feeling that it is too sophisticated. Drawings are easily and readily obtained and save much time in getting at the inner states of students. As mentioned in the two previous passages, they are revealing of attitude and behavior and are convenient materials for understanding the college reader. Such material, information, and revelation will lead the teacher to new planning and approaches to reading, to new methods and new usage of materials. They are a type of important background resource which can be obtained early in the class.

Depending upon what is wanted from the drawing, the instruction might state: "Draw a full picture of your family, including yourself, doing something." When the drawings have been received without signature or only in coded identification, they may be cleared for anonymous use. Now let us look at two classroom uses:

1. In class, present the pictures and ask the students to interpret them. The artist gets the benefit of their responses, and he might claim the drawing and give his own version. Thus, well-being can be sensed within the procedure. Therapy comes from the process. Any practitioner can handle this without being a psychiatrist or a psychologist.

Before proceeding to the second classroom use, do examine the drawings found at the end of this article and make your own observations and perhaps some interpretation.

Dee. Male, 24, married, a G.I., above-average mind, three point average in high school, average in college. He is a graduating senior in psychology and said, "I can't read, and I don't retain what I read. I need help if I am to carry on." The drawing gives an impression of rank to his wife who is placed above him. Notice the pressure lines of his hands and feet; observe the severe lip lines softened by a slight suggestion of mirth. Her legs and feet are omitted. Note the bare essential; no details or frills. Even the unsolicited comments carry the message.

2. The motivating stimulus to reading may follow as a consequence of the above activity by pointing out that writers who make "drawings" with words may have personal problems which they express in their stories. It may be identified as parallel empathy with the fellow who writes. Once this is established, the one who draws may now want to read more and find out. To illustrate, Ernest Hemingway's life will be used as an example.

What was Hemingway looking for in France in his tempestuous youth, later in Spain with ten years at the bull fights, in the Caribbean, in Africa, and in Ketchum, Idaho, in his last years? Is it too strong to say he was looking for Hemingway? What was there in his father's medical practice that made him flee, that turned Hemingway from blood? In maturity, this person was creating stories which were, perhaps, acting out his own earlier stresses and fears. Thus, it is possible to "read" a writer who had personal problems and who unknowingly set about to cure or relieve himself of these problems through his writings--first with others, mingling and co-mingling; then, in later life, more withdrawn, aloof or practically alone, and who returned to blood in a self-inflicted wound.

By the interchange of these approaches and improvising others, the reading teacher can utilize drawings as a way of getting into content analysis as the stimulant or motivating agent for getting reluctant, poor or frustrated college readers to read more.

Through the interpretation of the drawing and leisurely reflection, the professor can be guided in the selection of materials appropriate to the student's specific need, such as social adjustment, problems of family, emotional problems, and the improvement of self-image. While improving instructional reading levels and skills, the teacher is at the same time helping the student become aware of his psycho-social problems, and he can be led to a solution of them.

## SELECTING MATERIALS

Frequently appropriate and interesting materials are not available for college students with reading handicaps. However, articles can be found and specially selected for this group. Biographies and historical novels would make appropriate and excellent sources of supply.

Properly used, the drawings may serve well in arriving at what kinds of materials to use with any particular group.

By discussing the drawings in groups, more self-awareness can be brought to bear through listening to and sharing each other's ideas and recommendations, thus helping the individual to make the adjustment he needs and accomplishing this through reading.

To build a proper library of needs, it is necessary during these discussions to have one or two students keep notes about the more important thoughts and suggestions which are made, kinds of problems to be faced, and where or what texts, books or magazines should be provided for the reading class.

A natural sequel would be to take further steps, such as:

1. Plan for independent reading activity: some personal assignments
2. Some group projects
3. Follow-up activities
4. Individual sessions or interview with the professor.

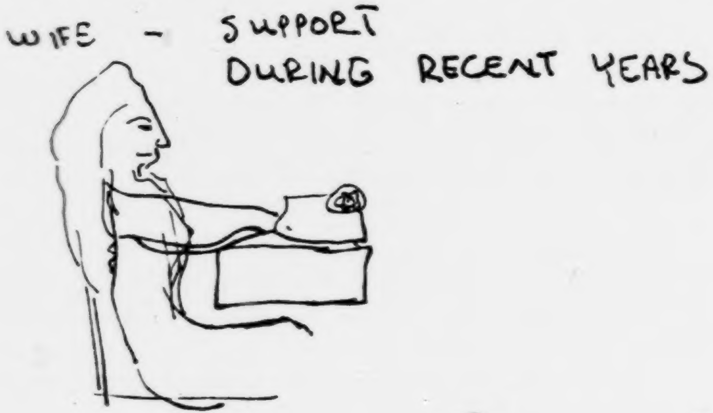
## CONCLUSION

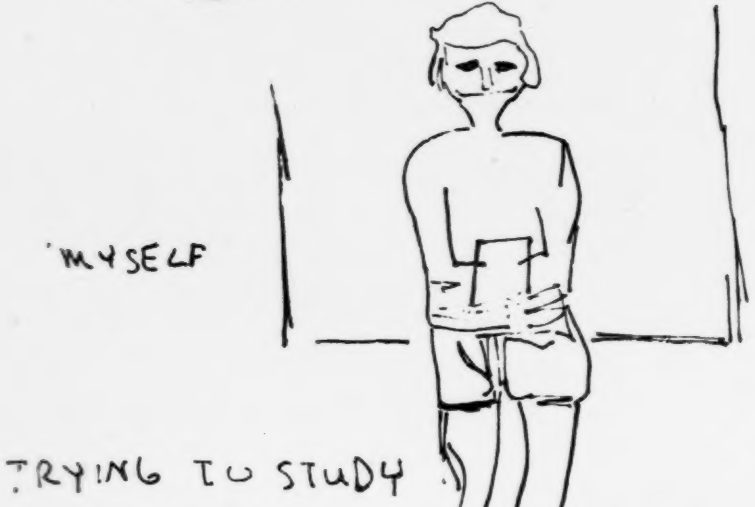
This clinical device has been proven; when used as part of a course as mentioned, it will take the time of three or four class sessions.

By the use of a simple instrument, such as a drawing, and managing it with respect, a teacher of reading may open many doors to reading and learning.

By providing group impressions of these drawings, an awareness of self builds up which may be the germ seed for converting another student to the world of reading.

By the mechanics of asking for a drawing, the student senses that the instructor is taking a personal interest in the class and each student.





# BRICKBATS AND BOUQUETS

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The simple truth is that just about the only source of real knowledge and expertize in the editing of a professional periodical is to be thought of as "on the job" training. For it is virtually impossible to foresee all the extraordinary happenings, dead-ends, and errors that will occur, without the actual experience of stumbling into them, finding a solution, and going on to the next set of mistakes or problems. So it certainly was in the case of the setting forth upon the scene of the Journal of Developmental Reading, which after seven years was taken over by the International Reading Association and which then assumed the shortened title of the Journal of Reading, its present name.

The thought of founding the Journal came to me as a need truly felt. It had taken me two years to get even one editor to give consideration to the publication of a short retention study I had completed. With my own experience vividly in mind--and that of scores of others with whom I had conferred--the attempt to originate a journal which would give major attention to the needs and interests of instructors of reading on the secondary school, junior and four-year college, and adult levels, was begun. Then followed more than eighteen months of preliminaries--seeking funds, soliciting editorial assistance, getting publishable materials lined up, settling upon the highly technical details of page size, typography, format, method of binding, number of columns to the page (here we stood adamant on the principle of one column to each page, like tradebooks mostly, rather than textbooks), special departments and running features, etc. Lining up advertisers was a separate venture, and let me here and now give full tribute to some of our most loyal and early supporters, such as Psychotechnics, Educational Development Laboratories, and book publishers like Macmillan, Harcourt-Brace, and another dozen or so.

If it is a cardinal rule never to feud with one's printer and publisher, it is a never-to-be-forgotten principle always to be fair, friendly, and cooperative with advertisers. It is writ in shining, indelibe letters that he who violates these commandments does so at his total peril, everlastingly!

Fortunately, we recruited several colleagues who had excellent business judgment for the financial arrangements, others who could tutor us in the vagaries of printers and the mysteries of galley and page proof, of dummy issues and page paste-up, of running heads and short titles, of setting up title pages and indexing a volume, and of triple-checking proper names. Even my own youthful apprenticeship as a printer's devil in a decrepit job printer's shop gave me some awareness, particularly at first, of the fathomless depths of my own ignorance and inexperience.

For the foundation that finally granted us three years of financial underwriting, it was necessary to project numbers--numbers of subscribers, cost of printing, receipts from advertising, total number of printed copies per issue, even the expected number of contributors. All these were of course the result of high hopes, utter panic, and determined effort. In two respects, however, we were most fortunate: after sending out more than several thousand first-class letters to training directors, teachers, department heads, deans, researchers, and analysts in reading, we had on the books more than 300 paid subscribers, whereas we had projected only 100-120 for that first year. Advertising, likewise, was above the predictions by about fifty percent.

Nonetheless, all publishing is a chancy business. As Jacques Barzun writes in his delightful and completely frank essay, "The Paradoxes of Publishing," everyone must come to accept the fact that "publishing is an economic structure generally conceded to be chaotic . . . a chronically sick industry." He continues:

> "The root of the evil in publishing . . . lies in its economics. Here is a small business that would like to be at once a profession and an industry. It cannot be the one, lacking the urgent duties and social rewards of a profession; and it can scarcely grow into an industry as long as it lacks control of both supply and outlet."

Barzun concludes:

> "From this defeatism it appears that publishing is not only sick and mad, but blind. For Americans read voraciously and incessantly. Beginning with advertising and going on to newspapers, comics, magazines, and free literature, the American citizen is more nearly saturated with print than the citizen of any other nation."

Let the amateur and beginner not despair, however. Publishers and editors do keep their sanity, and lots of them persist to a reasonable ripe old age. They do succeed some-how. And they do derive almost endless sources of surprise, satisfaction, contentment, even occasional pleasures. Not the least of these real pleasures are those of meeting colleagues again and again, of receiving warm and delightful letters from contributors who become fast friends of the editor. Indeed, were it not for these loyal and active associates, no editor could long survive, I suspect.

Among the memorable experiences, there is utterly nothing to equal the feeling of weightlessness that ensues when an issue is finally "put to bed"--except the oppressive feeling the next day that the succeeding issue is in dire straits, the advertising copy is inexplicably missing, the printing people just went out on strike. The projected lead article is withdrawn without previous warning by an unsympathetic and over-hasty author: he could not wait and so gave it to another editor who has already issued it! These are minor catastrophes, and they are but the beginning of what could be a twenty-to-thirty minute diatribe on foul-ups in publishing.

But there are also frequently amusing, sometimes pathetic, and occasionally startling developments in the life of an editor, one especially who edits not for pay, who steals time from his work, his family, and his community efforts, if any.

One instance of the totally unexpected but quite amusing incidents that may occur in the day's receipt of mailings arrived for me in early July. The letter, handwritten on social notepaper, began with this paragraph: "Your letter regarding the publication of my thesis arrived on my wedding day. I dare say that not many graduate students can make that statement." Well, that represents a genuinely unique wedding present, and we responded accordingly.

At this stage, perhaps, I should clarify the title of this commentary: the words "Brickbats and Bouquets" are those I placed on a file folder to designate the kinds of letters an editor sometimes receives. I set it up within a month or two of publishing the first issue. The file gradually assumed an obese and on the whole rather an interesting effect. Actually, the bouquets were somewhat more numerous than the brickbats which were aimed in our direction.

Two of the early negative criticisms related to the general outlook reflected in the editorial policy of selection. Generally speaking, we were prepared to publish almost anything that contributors sent by which we would encourage, educate, stimulate, or provoke our readers. Our preliminary intent was to divide the coverage about equally among materials having to do with the secondary, college, and adult teaching of reading; as the years went on, we saw an increase in secondary materials and a decrease in adult articles, but this was not due to our own choice. Another principle was to let writers, reviewers, or commentators say almost anything they wished, providing it would not get them--and us--into trouble as regards libel, defamation of character, or indulgence in irrelevant vulgarity.

Even before we had come out with Volume One, Number One, we received a long letter from a man with decades of experience behind him in elementary and remedial reading; he wrote quite bluntly to inform us that we were using "developmental" in an unacceptable fashion. He insisted that "developmental" referred rightly only to the process of acquiring reading habits during the first three or four years of school training. Well, that one was replied to pleasantly but noncommittally, for we knew, and he did too, we thought, that "developmental" had already come into frequent usage to express the continuing growth of reading competence from early childhood on to the years of physical maturity.

Another "brickbat" came as something of a surprise. One may expect to receive a curt "cancel my subscription" for some reason or another. But this was from a well-known proponent of good study habits whom we had asked to serve as an Advisory Editor for the second year of our existence. He wrote an angry reply, after having accepted the assignment, demanding the exclusion of his name from any and all activities of the *Journal of Developmental Reading*. So we of course complied. We never did find out what precisely made him disgusted, disillusioned, or otherwise fiery-tempered.

With this mention of the Advisory Editors comes the very pleasant obligation of acknowledging some of the best, most encouraging, and finest assistance anyone editing might hope to have. In frequent instances, articles contained materials that the immediate staff was not really competent to evaluate. So we called upon one or another of the Advisory Editors to render judgment. They never failed us. Indeed, most of them replied at such length that we were able to use their very words in suggesting to contributors some revisions, minor changes, or complete dropping out of certain portions of papers, so that we might later print the article. They were also exceedingly helpful in getting new materials, in enlisting new contributors, and in offering new ideas for possible papers. I need not mention their names; I merely refer you to our regularly appearing page which set forth the staff and those Advisory Editors who were giving us many patient hours of their exceedingly valuable judgment and interest and concern.

The two "brickbats" detailed in preceding paragraphs just now are but a pair of unsolicited, adverse criticisms that we experienced very early in the *Journal*'s history. Others came in now and again, for the most part completely unexpected. Usually what was anticipated as possibly objectionable was never so designated. On the contrary, that which was thought to be unexceptionable did on occasion create controversy.

Not that controversy is completely unwise in a professional journal. Far from it. Indeed, I kept hoping for some severe and voluble differences of opinion and judgment to be set forth in print. For good, honest divergence of views is a healthy and stimulating condition. In the entire decade of publication while I was editing, only one such direct confrontation of opposing views was fully aired in the pages of the Journal of Developmental Reading. The matter was continued through three issues, less than a year, and then subsided, with no real personal animosity resultant, so far as I was ever able to judge.

As for the "bouquets" that we received, I may cite two, again at the close of our first year of publication. One very gratifying note came from a friend who had edited two military publications for half a dozen years. He asked to receive copies of the Journal, being greatly interested himself in reading proficiency. His comments began as follows:

> "Your last two numbers are much improved. I sense that you are feeling much surer of yourselves than you were for your first two issues, and I think the Spring issue reflects this confidence in your work very noticeably. Since that time I feel you have hit your stride and need have no fears that your present editorial policies and practices are anything but successful."

The second came from a very old and close friend--we had worked together for our long written examinations to qualify for the doctorate. His experiences in writing and publishing were very extensive: he had produced articles, a book issued by a university press, and a successful trade book as well. He wrote:

> "I have looked over recent issues with a sharp eye, and I am very much pleased to see that you have avoided the sloppy editing and careless proofreading that we see in altogether too many good journals and books these days. If you can keep up your practices like this, you may be certain that your readers will appreciate all the tedious work of getting out a competent and readable journal."

But of course everyone makes slips, omits credits, and otherwise commits unforgivable errors. After three proofreadings by me and two by others, we still misspelled an author's name in the table of contents on one occasion. He was not very happy, but we did have it right for the article itself. Another case of name miscalling came out somewhat less unpleasantly. A good friend whom we shall call William wrote to ask "since when is my first name Joseph?" Well, we had his original typescript, and his typist had actually put his name down as Joseph, not William. So I xeroxed the first page with his new first-name and mailed it to him without comment. For once, my saving habits of keeping every last bit of paper relating to an author had paid off.

One is often asked about getting indexed by the major reference works in one's field. Well, to express swiftly what took well over three years of effort and countless letters here and there, being indexed is a rare and special privilege. And those that select periodicals for indexing consider themselves a little above the Avenging Angel and far from mortal in their dealings with editors and other misguided souls. It can be accomplished, usually, but it takes infinite patience, years of waiting, and tons of correspondance in nearly every instance.

So not all the mail is favorable, ever. In our second year, we had one letter which, after the usual "cancel our subscription," went on to note that "the article by Dr. B. Q. Jones in your last issue goes against all the principles to which our XYZ Reading Center subscribes," and it was signed Mary W. Jones, BA, MA, Litt D. Well, I replied at once offering the pages of the Journal for Miss Jones or a member of her staff to publish something in the form of a rebuttal, regular article, or just a letter to the editor. I thought it was a rather successful reply. It gained total silence.

Most authors and contributors are thoughtful, considerate and very, very patient. They wait long for their turn to come up--indeed the time lag for some professional periodicals runs from two to four years. But some few would-be contributors are almost naively misguided. At least once a month, one is likely to receive a note stating that the writer's colleagues are urging him to submit his comments in a recent symposium or question-and-answer session. Enclosed are the random, somewhat unorganized remarks. Now this sort of material is almost totally unusable, for out of context it means little or nothing to the reader. The same is true of most term papers, of special reports given orally or written up for credit in a course, of theses and abstracts as well. The writer must visualize his reader-audience, must bear in mind that an article is to be read as an entity, must realize that his writing has to stand entirely on its own merits and convince the reader without benefit of any condition other than that of the periodical in which it appears. So it is indeed a case of rewriting of otherwise excellent and provocative material for the specific purpose of appealing to the readers of a given journal.

In fact, prospective contributors would do well to scan back issues of the magazines they may intend to appeal to for publication. This sort of analysis indicates editorial policy rather readily--the editors prefer a few long and several short articles; or they refuse to publish anything longer than, say, 3,000 words; or they have a strong predilection for heavily footnoted materials, and so on. Some may prefer lots and lots of tables, charts; others count their pennies when it comes to engravings and the like. And still others are greatly impressed, perhaps, with an accompanying letter from someone well-known in the field who recommends the favorable consideration of an author's paper.

Let it be well understood, in all instances, however, that most sincere editors try their very best to find something worth publishing in every paper submitted. For every editor depends to a greater or lesser degree on the material that is sent to him voluntarily. He may solicit writeups of specific topics constantly; he may receive suggestions from his advisory staff for all sorts of papers. But in the long run, he prints largely what the mail brings in to him. So every prudent editor treats all worthwhile mailings with enthusiasm, hope, and deep concern. His success or failure may be determined by the good works of his friends, colleagues, or even his competitors.

As my colleague and frequent collaborator, Bernard Schmidt, expressed it in the October, 1967, issue of the *Journal of Reading*:

> "One of the many pleasures of manuscript reading for a publication like the *Journal* is seeing an almost infinite variety of opinions expressed, and the array of facts or near-facts phalanxed to support these opinions; but a greater delight--perhaps a diabolical one--is comparing the evaluations made by fellow manuscript readers. The same paper might be marked 'poor' or even 'trash' by some readers, and 'excellent, publish it' by others--all of whom are trained and respected persons in reading. Well, one could say, some are wrong and some are right, and that's the end of it. But we all know it's not so easy. Perhaps, to paraphrase Orwell, we could say all are right but some are more right than others, but this is about as far as most of us would go."

It should always be a reassuring thought to those who continue to submit articles, monographs or whatever for publication that the health and life-expectancy of editors and of their journals or publishing houses are dependent upon what comes across their desk in the daily mail. Every delivery is a challenge. Every postman's offering may present some lively materials, some cogent criticisms, some thoughtful appraisals and helpful, concrete proposals. Let it also be regularly recognized nonetheless, that any mail bag is more than likely to provide angry rebuttals, an author's curses for the omission of an expensive cut or seven page table (to accompany a three page article), a poison-pen letter ending with those favorite words, "CANCEL MY SUBSCRIPTION!"

All of this is labelled simply *variety in the life of an editor*, or indeed, as I call it, "Brickbats and Bouquets."

# PSYCHOLINGUISTICS AND READING

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It seems reasonable to expect that the psycholinguist can help us to understand the reading process, since psycholinguistics is the study of the relationship between language and the psychological processes in the human organism. Reading is closely akin to thinking, and thus qualifies as a psycholinguistic process. An understanding of what goes on when an individual reads should lead to better teaching and better learning of this psycholinguistic process. Since this conference is primarily concerned with college-level reading skills, we will restrict this discussion to the mature reading process, although psycholinguistics is equally concerned with the acquisition of reading and other language skills.

## EARLY WORK IN PSYCHOLOGY

Historically, psycholinguistics grew out of the work of Wilhelm Wundt (1832-1920), who founded experimental psychology (3). Wundt used the term *apperception* to describe the focus of attention within the field of consciousness. Apperception means the selection and structuring of internally directed experience as opposed to *perception*, which refers to externally directed sensing and detecting. Wundt asserted that the human being begins with the apperception of a general impression (the *Gesamtvorstellung*); then attention isolates some aspect of this impression, retaining a sense of the relationships. This ability enables the speed reader to grasp whole sentences at a glance. A person with superior reading ability dispenses with detailed analysis and instead catches words and phrases here and there as cues to reconstruct the thought. His apperception skill, the ability to synthesize internal impressions, is superior. But if the subject matter is unfamiliar and imperfectly understood, then the reader is forced into a piecemeal, detailed analysis of the utterance.

Edmund Burke Huey (9) studied the reading process through the psychological processes of attention and perception. He wrote, "Perceiving being an act, it is like all other things that we do, performed more easily with each repetition of the act. Repetition progressively frees the mind from attention to details, makes facile the total act, shortens the time, and reduces the extent to which consciousness must concern itself with the process" (9, p. 104). Thus the reading teacher emphasizes the need for practice in improving one's skill in reading, so that the performance seems almost automatic, and attention is paid only to the ideas and none at all to the processing of the print.

Even though we are aware of the importance of the fact that words are made up of letters, Huey and other early researchers built up a case for recognition of words by wholes. Erdmann and Dodge (9) measured eye movements in reading and found that the pauses per line did not vary greatly from line to line for the same reader with easy familiar reading matter. Their experiments tied in with Cattell's (1) work with the tachistoscope, which revealed that the reader was able to perceive whole words when he was unable to recognize the individual letters which make up the whole. Psychologists also found that some readers took the same amount of time to identify five unrelated letters as they did to recognize a five-word phrase. This research led reading teachers to the look-say method of teaching reading, without realizing that the reader in the laboratory had been an accomplished reader rather than one who was acquiring the skill. Today, writers like Smith (15) emphasize the fact that learning to read and the mature act of reading are separate skills and should be studied as such.

Other psychologists, like J. O. Quantz (3), whose 1897 experiment revealed the eye-voice span, studied perception from several angles, such as: Why does the attention span vary as the presentations change from numbers to letters to words or to sentences? and What are the effects of context and set on attention? They soon discovered that there was a low correlation or reading ability with abilities in other visual tasks, and that reading skill did not depend so much on intelligence as on a special linguistic factor. Their findings led to an emphasis upon psycholinguistics because the vital difference in perception was found to lie in the nature of human language.

## RECENT WORK BY LINGUISTS

The linguists who have been most influential in the field of reading are Fries (6) and Bloomfield (2) whose area of expertise was structural linguistics. Bloomfield's methods of teaching reading stemmed from his application to beginning reading of the concept of minimal contrasting phonemes, hence the "Nan can fan Dan" lines which rival "Look Dick look" for inaninity. Fries says that there are three stages in the reading process (6, p. 132). The first stage is the "transfer" stage, wherein the child learns to transfer from the auditory signs to a set of visual signs for the same set of language signals. The second stage covers the period during which the responses to the visual patters become habits so automatic that the graphic shapes themselves sink below the threshold of attention. The third stage begins when the reading process itself is so automatic that the reading is used equally with or even more than live language in the acquiring and developing of experience.

Noam Chomsky's seminal ideas in linguistics have renewed and accelerated the study of language and its related processes. (17) Chomsky's model of language competence offers descriptions of the sentences of English, descriptions of the deep structure, semantic content, and phonology of each sentence. He believes that the reader processes meaning at the deep level of structure and comprehension takes place at that level. He describes the relationships between the surface and deep levels and shows how they are subject to various performance factors.

Goodman's (8) work with miscues helps us to understand the psycholinguistic performance processes at work. Even though the reader decodes the written language counterparts incorrectly, he can process the resulting language through structural and semantic dimensions and interpret the data from the deep structure relative to his established objectives.

The complexity of the reading process is revealed by attempts of researchers like Ruddell (13) to devise psycholinguistic models of the reading act. His systems of communication model attempts to describe the cognitive strategy as the reader gathers data from the printed page, evaluates the adequacy of the information, organizes and synthesizes the data, and builds and tests hypotheses about it, always aware of the need for shifting strategy as he adds new information to that which he already has acquired from various sources.

Research by Fodor, Garrett, and Bever (4, 5) and others on the psychological reality of language processing is valuable in its potential application to the improvement of the teaching of reading. The complexity of embedded structures requires increased processing time for comprehension. An experiment which placed clicks near the end of phrases confirmed the fact that language is processed in phrases, and that the phrase is an important unit in the psycholinguistic reading act.

## A LOOK AT COMPREHENSION

Smith's book Understanding Reading (15) brings the reading teacher a synthesis of the latest work in the area of psycholinguistics in very readable form. He details how G. A. Miller's work in communication lends itself to understanding of the reading process. Communication theory relies upon the redundancy of language and its application to the reduction of uncertainty in communication. In reading, information is acquired through a mathematical number of alternative possibilities. The exact number of alternatives can be specified for letters, an approximate figure can be put to the number of words, and there are quite reliable ways of estimating the amount of information in a particular statement by using what we know of the human perceptual systems as a yardstick.

Smith says that just as the reader can identify the word before he can isolate clearly the letters which make up the word, the fluent reader extracts meaning from a sequence of words before identifying any particular ones. He marshals six arguments from the process of reading aloud which support his thesis. First is the eye-voice span which reveals that the eye and mind have seen and taken in the words before the reader articulates them. Second, the eye-voice span is determined by phrase boundaries and the structure of the passage read, rather than the limits of the short term memory. Third, the pronunciation of words like permit and read require that we process the word according to its function in the sentence. Fourth, the capacity of the eye-voice span varies with the meaningfulness of the configuration. Fifth, a reader's errors are more often semantic rather than visual confusions. Sixth, bilinguals are able to read mixed passages as long as they are faithful to the meaning of a passage, often unaware of the mixture of the languages. A further proof comes from our ability to reconstruct the meaning of a sentence although we have forgotten the exact words in it.

## READING, A COGNITIVE ACT

Cognitive psychologists, such as Ulric Neisser, have added immeasurably to our understanding of the reading process. Neisser (11) uses the term cognition to mean "all the processes by which the sensory input is transformed, reduced, elaborated, stored, recovered and used." Sensation, perception, imagery, retention, recall, problem-solving, and thinking are all cognitive processes involved in the reading act.

Constance McCullough, in an article in the February 1972 Reading Teacher, explores thoroughly the way in which a reader's cognitive processes deal with a passage from a geography book. She says, "The process of reading involves the awareness of interacting elements and the interaction of those elements, the raising of questions, the examination of clues, the search for emphasis, the establishment of conjectures, the maintenance of an attitude of expectation, and, as the unexpected occurs, the modification of previous interpretations and expectations." (10)

Slobin's (14) recent work explores the question: Can thought and language be separated? He suggests that Vygotsky and other Russians prove that cognition, in fact, does occur in the absence of language. Vygotsky developed the idea that there are strains of nonverbal thought ("tool" thought involved in the solution of instrumental problems) and non-intellectual speech (emotional cries), and he attempted to trace their interacting development until the point in man at which speech can serve thought and thought can be revealed in speech.

Piaget (12) takes the position that cognitive development proceeds on its own, generally being followed by linguistic development. Language may amplify or facilitate development of thinking, but it does not in itself bring about cognitive growth.

Thus, in the mature reader, the ability to process the print which he faces depends upon his ability to process language. As we further study the relationship between language and cognition, we should come across further insights into the nature of the reading process. Then we can say with Huey (9, p. 6), "To completely analyze what we do when we read would almost be the acme of a psychologist's achievements, for it would be to describe very many of the most intricate workings of the human mind, as well as to unravel the tangled story of the most remarkable specific performance that civilization has learned in all its history."

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# AN INVESTIGATION OF PIAGET'S DEVELOPMENTAL ASPECTS OF COGNITIVE FUNCTIONS

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Experts and novices in the field of reading reiterate orally or in writing E. L. Thorndike's (12) postulate "Reading as Reasoning," thereby professing that reasoning or thinking is an integral part of the reading process and neither can be divorced from the other.

## THINKING AND READING

According to Burton, Kimball, and Wing (2), thinking is "a persistent effort to examine the evidence which supports any belief, solution, or conclusion" ...and is "the critical, reflective search for valid conclusions." Cleland (3) affirms "The need for effective reading and thinking as an aid in the perpetuation of our pattern of life in a democracy is obvious" ...and... "ineffective reading and fallacious thinking may spell doom for one of the free great societies." Duckworth (4) noting Piaget warns "not simply to repeat what other generations have done" ...and... "not to accept everything they (the minds) are offered. The great danger today is of slogans, collective opinions, ready-made trends of thought."

The onus then is on 'Thinking' when engaged in the act of reading. In fact, so the investigator believes, without thinking there is NO reading. Reading is then a function of thinking or directly dependent upon thinking. While literature expresses quite clearly that no one can teach anyone "how to think," (3) it also suggests one can be helped to improve this ability.

Hence, the question to be asked is how can this ability be improved? Thinking is linked to cognitive processes and development. The latter is continuous in its qualitative growth and observable in its stages of changing structures. The former requires readers "to create, invent, and discover" and also requires "minds that can be critical and can verify" (9) These are cognitive functions, forms of thinking, which are believed to constitute outcomes of thinking through reading. In this light truly "Reading is Thinking." However, for years the investigator has observed in secondary schools as well as in colleges and universities that these and other attributed forms to 'Reading as Thinking' are in observable student reading performances either dormant, not challenged, not yet developed, or just missing. Certainly, it can be aruged that maturation plays an indispensible role, but one must guard himself against oversimplification, for maturation does not explain everything. Particularly not, if when students are called upon to hypothesize, test, accept, reject, verify, or prove, they instead experience insurmountable difficulties and therefore fail to apply observable forms of thinking that would indicate ongoing cognitive development. Then, reading is no longer thinking but is demoted to the mechanical processes of seeing and pronouncing. With it, as testified in the literature, the perpetuation of the free great societies is in danger if not doomed to failure. Have the reading experts missed in the teaching of 'Reading as Thinking'?

## THE THEORY

The theoretical background of this investigation is based on Piaget's (6 + 8) dynamic theory of cognitive development. This theory has been chosen because it professes universal validation. Plaget (7, 10) declares that his dynamic theory of cognitive development "has been found in various countries (in Europe . . . but also in African peoples, in the children of the Bushmen, in Iran, the U.S.A., Canada, and in Martinique in the West Indies."

The part of the State-Dependent Theory, briefly to be discussed here, is the Formal-Operational Thought Period which is the last of the "actual succession of genetic steps in the ontogenetic span." (5, 264). The formal thought period begins at the age of eleven and ends at the age of fifteen. However, Piaget (7, 10) contends while "the ordering of the stages is constant and has been found in all the societies studied . . . the average ages at which these stages appear vary a great deal from one society to the other." Hence, stage and age do not need to coincide with one's chronological time table, nor do all individuals need achieve the final stages of development. Each stage and its structures are embedded in and grow out of the preceding ones to shape a new and higher form of equilibrium, thus showing hierarchical as well as integrated relations between successive stages. Accordingly, the stage of formal operation is preceded by the stage of concrete operation. In the concrete operational thought period, the possible could only be treated as a special case of the real; in the formal operational thought period, the real is treated as a special case of the possible. In the period of formal-operational thought, realities are dealt with as conditionals and are grist for free conceptual manipulation which spells out that possibility is superordinate and reality subordinate. Reality is thus conceived as a subset within the totality of things or as the "is" portion of a "might be" totality. As Flavell (5, 205) attests to it is the job of the adolescent to discover the "is" portion of the "might be" totality by imagining all that might be there and "thereby of much better insuring the finding of all that is there."

To facilitate fuller understanding of the essential characteristics of the formal-operational thought period growing out of the concrete-operational thought period, yet still remain within the restricted space allotted for this report, the descriptive tables 1 and 2 must be carefully studied. In an earlier presentation as well as in an earlier article, the author (10 + 11) has investigated Representational Intelligence and Sensory-Motor Intelligence, both states that precede concrete operational thought.

Table 1: Shows development and its limitations of cognitive growth at the time the child of seven to eleven years of age grows into, behaves, and acts according to the subperiod's components of concrete-operational thought. This table has been prepared from and is based on the writings of John H. Flavell in *The Developmental Psychology of Jean Piaget*, pages 7, 165, and 203-206.

| Concrete-Operational Thought Enables the Child, ages 7-11, to: | Limitations of Concrete Operations: |
|---|---|
| 1. undertake the primary task of organizing and ordering what is immediately present; | 1. Concrete operations are concrete: they orient child's structuring and organizing activity towards concrete things and events. |
| 2. organize and stabilize the surrounding world of objects and events by putting them into correspondences or associations; | 2. The starting point is always real rather than the potential. |
| 3. be a sober and bookkeeperish organizer of the real and a distruster of the subtle, elusive, and the hypothetical; | 3. Extrapolation to the not-there is a special case activity. |
| 4. advance cognitive superstructures consisting of systems in equilibrium and of tightly knit ensembles of logical and infralogical groups of hybrid logic-algebraic structures; | 4. Child does not delineate all possible eventualities at the outset. |
| 5. extend thoughts from the actual to the potential; | 5. Child has to vanquish the various physical properties of mass, weight, length, area etc. one by one because his cognitive instruments are insufficiently "formal", that is, dissociated and detached |

6. Understand the possible only as a special case of the real.

7. possess two kinds of reversible operations: negation or inversion and reciprocity, indigenous to class and relation groupings respectively.

from the subject matter.

6. Concrete-operational systems of groupings do not interlock to form simple integrated systems.

7. Child does not posses a total system which permits him to solve multivariable problems requiring coordination.

Table 2: Shows the development of cognitive growth at the time the adolescent-adult grows into, behaves, and acts according to the period and its sequences of formal-operational thought. This table has been prepared from and is based on the writings of John H. Flavell in The Development Psychology of Jean Piaget, pages 205, 206, and 222.

Formal-Operational Thought Enables Adolescents, ages 11-15, to:

1. cast results of concrete-operational thought in the form of propositions thus connecting them logically through implication, conjunction, ideality, and disjunction; this makes thought formal;

2. develop orientation towards the possible and the hypothetical;

3. envisage all the possible relations in view of the data pitting the real versus the possible;

4. combine experimentation and logical analysis to find out which of the possible relations hold true;

5. have the potentiality of imagining the very obvious and the very subtle that might be there;

6. try through cognitive strategy which is hypothetico-deductive in character to determine reality within the context of possibility;

7. discard facts which hypotheses infirm or confirm, the latter to join the reality sector;

8. subject the variables to a combinatorial analysis.

## INSTRUMENTS AND PROCEDURES

According to Piaget, formal operations are interpropositional, logically related and observable in the form of a lattice. This lattice structure consists of a combinatorial analysis that is hypothetico-deductive in character and is expressed either in verbal-descriptive or logico-mathematical terms. Both approaches have been used as shown in Table 3.

The lattice structure begins with four initial classes, as for example, Plants (P), Animals (A), Land (L), and Water (W). These classes are given to the students with the instruction to make as many combinations as are possible based on a two-way classification. The task involves primary addition of classes, the vicariances of them, and their multiplication. Thus the combinatorial operations of the lattice structure can, in fact, indicate the stage at which a student is thinking, presently be able to think, or is willing to think when reading. To further exemplity 'Reading as Thinking,' a Twenty-five word passage was picked at random from HISTORY: U.S.A. (1, 241). The instruction was if A, the missionaries, and B, the mountainmen, are two variables of which some outcome X, the settlement, might be some kind of function, write out all the contingencies that are possible within this passage. The task is again to systematically isolate all the individual variables plus all possible combinations of the variables to form a combinatorial analysis.

Table 3: Lattice structure showing combinatorial analysis in either verbal-descriptive or logico-mathematical terms.
The four initial classes: Plants (P), Animals (A), Land (L), and Water (W).
Interpropositional operations showing the sixteen steps:

1. 0 (no living things on land or in water)
2. P L only (plants on land only)
3. P W only (plants in water only)
4. A L only (animals on land only)
5. A W only (animals in water only)
6. P L and P W but no A L or A W (plants on land and in water but no animals on land or in water)
7. P L and A L but no P W or A W
8. P L and A W but no P W or A L
9. P W and A L but no P L or A W
10. P W and A W but no P L or A L
11. A L and A W but no P L or P W
12. P L and P W and A L but no A W
13. P L and P W and A W but no A L
14. P L and A L and A W but no P W
15. P W and A L and A W but no P L

16. P L and P W and A L and A W (all living things on land and in water)

The essential differences between adolescent and childhood reasoning are two. First, the younger subjects discover the base class associations PxL, PxW, etc, as they apply themselves to the data, whereas the older ones tend to conceive these associations beforehand as propositions; second, unlike the 7-11 year old, the adolescent possesses a technique for generating all the possible combinations of these four associations into the lattic structure of sixteen steps (5, 213).

To arrive at some standardized data, Comprehension Part II of the Nelson-Denny Reading Test, Form A, has been administered and the answers to the inferrential questions have been analyzed.

The population sample of the three investigations were thirty-nine university students in their second year and eight in their fourth year. All samples were administered individually under identical conditions and using same directions.

## RESULTS

To remain within the format of this paper group results are shown only.

(a)

| Grade | Number | Sex | Formal Thought | | | | | Nelson-Denny, P.II, Compr. | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Total Formal | Correct Formal | Mean of Corr. Formal | Incorrect Formal | Mean of Incorr. Formal | Total Inference | Correct Inference | Mean of Correct Inference | Incorrect Inference | Mean of Incorr. Inference |
| 14 | 39 | F+M | 624 | 136 | 3.49 | 488 | 12.51 | 273 | 147 | 3.92 | 126 | 3.32 |
| | 28 | F | 448 | 94 | 3.36 | 354 | 12.64 | 196 | 89 | 3.18 | 107 | 3.82 |
| | 11 | M | 176 | 42 | 3.82 | 134 | 12.17 | 77 | 58 | 5.27 | 19 | 1.73 |
| 16 | 8 | F+M | 128 | 50 | 6.25 | 78 | 9.75 | 56 | 37 | 4.63 | 19 | 2.38 |
| | 5 | F | 80 | 31 | 6.02 | 49 | 9.80 | 35 | 22 | 4.40 | 13 | 2.60 |
| | 3 | M | 48 | 19 | 6.33 | 29 | 9.67 | 21 | 15 | 5.00 | 6 | 2.00 |

Correlation coefficients of group means in both FORMAL THOUGHT and NELSON-DENNY COMPREHENSION are extremely high, centering around .99. This is apparently due to (1) their close quantitative similarity and (2) their small N.

Analysis of Correct Formal* Thought Answers:

(b)

| Grade | Number | Sex | Partial Concrete Thought | Concrete Thought | Partial Formal Thought | Formal Thought | No Groupings | Total Correct Answers* |
|---|---|---|---|---|---|---|---|---|
| 14 | 39 | F+M | 4(8) | 23(92) | 5(36) | - | 7(0) | (136)* |
|  | 28 | F | 1(2) | 18(72) | 3(20) | - | 6(0) | (94) |
|  | 11 | M | 3(6) | 5(20) | 2(16) | - | 1(0) | (42) |
| 16 | 8 | F+M | 1(1) | 3(12) | 3(35) | - | 1(0) | (50) |
|  | 5 | F | 1(3) | 1( 4) | 2(24) | - | 1(0) | (31) |
|  | 3 | M | - | 2( 8) | 1(11) | - | - | (19) |

Numbers in brackets (b) correspond to the numbers of correct combinatorial operations in lattice structure: the number preceding represents the number of students. Example: 4 (8) says: 4 students have done 2 of the four basic combinatorial operations correctly; hence, 4 x 2 - 8. 23 (92) reads 23 students did the four basic combinatorial operations or 23 x 4 = 92 or 23 (92). 5 (36) under partial formal operational thought needs detailed explanation. Of the five students, one female student did six, two did seven combinatorial operations correctly or 20 together; and one male student did seven and the other nine operations correctly or 16 together. Partial female and male responses then make a total of 36 correct partial formal operations

Reading horizontally (b), 7 of the female students have not yet achieved the stage of concrete operational thought because 6 students did not show mastering of the basic groupings-no groupings-and one female student appears to be growing into the concrete period.
Eighteen female students appear to be "in equilibrium" at the stage of concrete-operational thought and therefore ready to begin the dynamic cognitive growth into the formal operational period, while 3 female students appear to become equilibrated at the stage of formal-operational thought-partial formal thought. Similar observations can be made when analyzing the answers to the inference questions on the Nelson-Denny Reading Test, Form A, Part II Comprehension (a). Of the same 28 female students, analysis indicated that 7 had all inference answers incorrect or failed them to answer; 13 students answered 2, 3, and 4 inference questions correctly, and 8 answered 5 and 8 correctly. Comparing female achievements in both investigations, the same 7 students who did not attain the stage of concrete operational thought did also not score on inference questions; those who attained the concrete operational stage compared likewise. A 'better' scoring on "Comprehension" was shown by those who probably on account of greater contextual guessing tresspassed into the formal operational thought period. However, only further intensive study of the performance of these students could verify the latter assumption.

Of the 25-word passage, similar results have been obtained. Eight of the 28 students did not show any written-out contingencies; 15 produced up to four and five possible combinations; and 5 produced up to seven hypothetical operations within a minimum of ten possible. Again, results compare favorably with those cited above.

Interpretations of data of the male-results, Grade 14 in (a) and (b) as well as those of Grade 16 F+M in (A) and (B) are similar; but Means of male-performances in (a) of both Formal Thought and Nelson-Denny Comprehension show superior performances over Means of female-performances. A fact that agrees favorably with Piagetian cross-cultural investigations.

The results of the three investigation samples can be summarized by stating that (1) the concrete-operational stage precedes the formal-operational stage; (2) Individuals who have not yet cognitively developed into the formal-operational stage have greater difficulties in solving inferential questions than those students who are at least in the beginning of the formal thought period; (3) chronological ages are not the decisive factors in achieving formal-operational thought that is, one adolescent may be still limited to the stage of concrete-operational thought, while another individual of same age or even younger may be at the stage of formal-operational thought; (4) knowledge of the stages of cognitive development helps to assess individual intellectual development in and through reading; (5) readiness for various kinds of instruction including reading can be more effectively planned; (6) assignment to or placement in a remedial reading program can be dealt with more efficiently in accordance with student's cognitive development; and (7) diagnostic assessment of individual students within classroom instruction or the total school program can become more meaningful.

## HYPOTHETICAL CONCLUSION

While the partial account rendered of Piaget's universal dynamic theory of cognitive growth in its relationship to 'reading as thinking' is naturally dwarfed by the limitation of this paper, yet, an immediate urgency for further qualitative study of formal-operational thinking when reading is not only a timely demand but also a much needed request in the perpetuation of democracy. The challenge to the reader is to test his own stage of formal-operational thought in reading by asking 'In what way does Thorndike's postulate "Reading" (A) "as Reasoning" (B) help to ascertain and to improve the free great society (X)? or 'Does (A) alone elicit (X), but (B) does not?'

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# THE ROLE OF THE READING SPECIALIST IN HELPING COLLEGE STUDENTS FORMULATE COMMUNICATIVE SKILLS IN A CHANGING SOCIETY

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> In education, as in other affairs, man's purpose is to move forward and upward. Sometimes he moves slowly and painfully; occasionally he thrusts onward with amazing speed. Inevitably he demonstrates that change is an unalterable fact of human existence, and that, while he has no control of some of the influences that create changes, he has direct control of other influences. What man does with the influences he can control makes a real difference in the quality of his living. (1, p.3)

Today's highly technological world creates new demands, offers new opportunities, and provides new challenges to the reading specialist. Perhaps never before in the history of mankind have the communication skills been more important than they are in our ever-changing society.

The open-door policy of the vast majority of junior colleges in our nation has paved the way for a great influx of students of divergent skills and experiences. Some of them come to us from low socio-economic areas; some from "middle class" society; and some are from wealthy homes; some are veterans while others are protestors; some are deeply religious while others are agnostics; some have traveled extensively--some have not; some are married and are financially secure while others have financial problems. Whatever the clientele or their purpose, they all have one common goal--a search for something that will provide for them self-satisfaction, security, and happiness. In essence they seem to be saying, "Here I am! Help me! I want to learn!" The ultimate realization of these needs is based on some form of reading and the related communication skills. Herein lies the responsibility and the challenge of the reading specialist.

Reading and the related communication skills form the very basis of the entire educational system. Bond and Tinker have stated:

> If one can read well, he can function more effectively in daily activities, achieve more satisfactorily in school learnings, and satisfy emotional and intellectual needs. He can maintain better personal and social adjustment; appreciate better our cultural heritage, and be a better citizen. Furthermore, the importance of good reading ability becomes immediately obvious when we examine the handicaps of those being handicapped in practically all walks of life. They become frustrated individuals who are prevented from satisfying many of their important emotional and intellectual needs. (2, p. 8)

According to the report of the National Reading Council's Inaugural Conference at the White House in 1970, "There is a lessening number of unskilled jobs, which do not require effective reading skills, in the economy at this time. Twenty-five years ago, 30 per cent of jobs in the United States could be described as unskilled; but today only 15 per cent are so described. Probably by the latter part of this decade only 5 per cent will be described as jobs that can be held by the low achieving reader." (3)

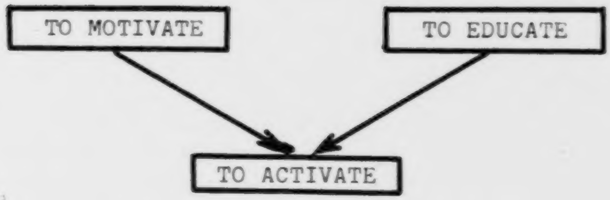
Through personal observation, reading of current reports, and encountering the mass media, we quite readily are made aware of the almost daily changes in our society. In the words of the old song, "The times they are a'changing." More than two thousand years ago, Heraclitus stated that "A man can never step in the same river twice." (4, p. 5) A recent survey reveals that more gains have been made in the world's knowledge in any recent year than in 100,000 years of the Stone Age. Robert Oppenheimer has stated that knowledge of the physical sciences can double every eight-and-a-half-to-twelve years. All of these tremendous advances in scientific discoveries, industrial and medical technology, and all other aspects of a fast changing society have made it necessary for today's college student to adapt physically, emotionally, and intellectually to almost daily changes in his environment.

When we consider the changes that have occurred, that are occurring, and that will occur, we are keenly aware that the development of sophisticated communication skills among college students can be the answer to economic and social success and the alleviation of hate, destruction, poverty, ignorance, and illiteracy among peoples of the world.

The roles of the reading specialist are almost innumerable; however, three of the most important facets in helping college students formulate proficient communication skills can be described in the following three areas:

## TO MOTIVATE

Motivation has been described as goal-seeking behavior growing out of the existence of needs. "To motivate" is one of the underlying factors in the development of adequate



communication skills. To properly motivate the college student of today's fast paced society requires unique insight into the basic needs, desires, and aspirations of those students. To be able to motivate in the fullest sense of the meaning, the reading specialist should be a warm, friendly person who is human enough to establish rapport with the students. He must be able to motivate each student to the full realization of his very own individual dignity and worth regardless of any insecurities that he might feel because of inadequate reading ability and the related communication skills. The needs of the college students can be more fully realized through adequate training, encouragement, love, respect, and understanding on the part of the reading specialist.

## TO EDUCATE

Careful planning and foresight on the part of the reading specialist is necessary in order "to educate." It is wise, as Mager states, to begin with these three questions:

1. What is it we must teach?
2. How will we know when we have taught it?
3. What materials and procedures will work best to teach what we want to teach? (5, p. 10)

We must realize that the things we teach, how we teach them, and the materials used should be relevant to the everyday needs of students.

The following story is related here as a challenge to reading specialists across the nation:

"I Taught Them All"

> I have taught in high school for ten years. During this time I have given assignments to a murderer, a pugilist, an evangelist, a thief, and an imbecile. The murderer was a quiet little boy who sat on the front row and regarded me with pale blue eyes; the evangelist, easily the most popular boy in school, had the lead in the junior play; the pugilist lingered by the window and let loose at intervals a raucous laugh that startled even the geraniums; the thief was a gay-hearted Lothario with a song on his lips; and the imbecile, a soft-eyed little

> animal seeking the shadows.
>
> The murderer awaits death in the state penitentiary; the evangelist has long lain now in the village churchyard; the pugilist lost an eye in a brawl in Hong Kong; the thief, by standing on tiptoe, can see the windows of my room from the county jail; and the once gentle-eyed little imbecile beats his head against a padded wall in the state asylum.
>
> All of these pupils once sat in my room and looked at me gravely across worn-brown desks. I must have been a great help to those pupils--I taught them the rhyming scheme of the Elizabethan sonnet and how to diagram a complex sentence.
>
> Author Unknown (6, p. 199)

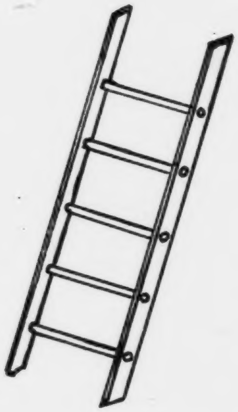
John Dewey recognized that education is a process of living and not just a preparation for future living. Learning how to live and adapt to the environment in our ever-changing society is of utmost importance to college students. They are seeking skills that will provide solutions to "now" problems rather than "tomorrow" problems. If we, as reading specialists, will help provide them with tools to communicate with themselves, and each other, our mission "to educate" has been partially fulfilled. As we strive daily to assist students in the procurement of more proficient communication skills, let's teach them that learning how to learn can be a valuable achievement in a rapid changing society. Let us educate the students to the extent that they cannot say, "I know you believe you understand what you think I said, but I am not sure you realize that what you heard is not what I meant." Anonymous. (7, p. iii)

## TO ACTIVATE

One major role of the reading specialist is that of helping college students activate the communication skills to such an extent that learning is useful, significant, and meaningful in the growth of their intellectual, spiritual, and social development. A common goal of all education is to help students (regardless of age, race, background, etc.) to live fuller and happier lives in adjustment with their changing environment, to develop the best elements in their personal culture, and to achieve the social and economic progress which will enable them to take their place in the modern world and live in peace together.

As the reading specialist helps the student to activate his proficient communication skills, man's needs should be considered. Maslow has classified the basic needs of man into physiological needs, safety, love, esteem, and the need for self-actualization.

This hierarchy of needs is arranged with the most basic and demanding at the bottom of the sequence and the least basic and demanding at the top. As these needs are fulfilled in man, he becomes more receptive to the needs of others in his environment. The awareness of others and the fulfillment of needs lead to both the desire and the necessity of adequate communication skills among all people of the world.



Self-Actualization

Esteem (including self-respect
and a feeling of success)

Belongingness and Love

Safety

Physiological needs (hunger,
thirst, sex)

(8, p. 168)

In conclusion, may each reading specialist across the nation be challenged

TO MOTIVATE

TO EDUCATE

TO ACTIVATE

each individual student in the development of communication skills that will enable him to become a self-actualized person.

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# THE INFLUENCE OF INTENTION TO REMEMBER ON IMMEDIATE AND DELAYED RECALL

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Some writers have viewed reading as a simple process of pronouncing words (9) or seeing more and seeing it faster (24). Others, however, have felt that reading is a much more complex process which involves some level of understanding of the material read. In an analysis of reading behavior, Russell (20 p. 99) suggests that reading is a very subtle and complex act which involves at least four overlapping stages:

1. sensation - the physical process of seeing.
2. perception - getting the meaning of the word as a unit of language.
3. comprehension - understanding the meaning of the author.
4. utiliazation - using what is read.

H. P. Smith (21 p. 5) also delineates the complexity of the reading process. He comments that "effective reading requires a convergence of meaning--bringing meaning to the printed page in order to take meaning from the printed page... reading may be called an interaction between the printed page and the individual reader." Hildreth (13 p. 545) views reading as a complex process which involves the reader's purpose, motives, background, and habits. Hildreth further suggests that "in reading, getting the meaning is all that counts. Everything in the learning process must contribute to eventual grasp of meanings, to read with full understanding."

## MEANINGFUL VERBAL LEARNING IN THE SCHOOLS

For centuries, much school learning has demanded an interaction between the learner and the printed page. A primary instructional tool in American education has been the textbook. Historically, The New England Primer, published in about 1690, was the first educational "best seller." A second educational "best seller" was Noah Webster's The American Spelling Book, better known as the Blue-Back Speller, which first appeared in 1783. A third set of meaningful verbal material, McGuffey's Readers, appeared between 1836 and 1844 and dominated the classroom for fifty years. Finally, since 1900, American education has alternately adopted and rejected the "whole" word method, the experience approach, the phonics approach, eclectic approaches, and the individualized approach to teaching children to read and learn from meaningful verbal material. Emphasis on the textbook has continued to increase. Few, if any, of us can recall many academic experiences in which a book was not a significant factor in the learning.

Teachers from the first grade through graduate school expect their students to learn from meaningful verbal material. Yet, for all the emphasis placed on meaningful verbal learning, "few pedagogic devices in our time have been repudiated more unequivocally by educational theorists than the method of verbal instruction" and excellent reasons exist, suggests Ausubel (3), for the general disrepute into which verbal learning has fallen. One reason is that meaningful subject matter has been presented to students in rote fashion. Also, many educators maintain a theory of learning and teaching based upon controlled, laboratory experiments, which employ animals or, at best, human subjects in learning nonsense syllables, individual words, verbal units, serial learning, or paired-associate learning. Too many educators attempt to incorporate the generalizations of laboratory learning into the classroom where an individual child is expected to learn from his textbook.

## THE READER'S PURPOSE

For many years psychologists and educators have maintained that a reader's purpose for reading importantly affects the reading product. Most of the poor reading that is done, especially in the content areas, may be attributed to "purposeless reading to satisfy purposeless assignments," suggests Artley (1, p. 71).

Ausubel and others (2) cited several studies which show that deliberate learning in response to explicit instruction is both more effective (7, 14, 16, 18) and more precise and specific (17) than is unintentional or implicitly instructed learning. Also cited were experiments which indicated greater recall when the subject expects that he will be asked to recall the material (5, 10, 15, 25). These studies all provided the expectation of recall in advance of initial learning.

Ausubel and others (2) attempted to measure the effects of admonitions to remember after learning had taken place (see Figure 1 for a graphic representation of the research design used in Ausubel's study). The control subjects, fifty-three undergraduates in an educational psychology class, read and studied a 1400-word passage on opiate addiction for twenty-five minutes. They were told before reading that a multiple-choice test would be given after the study period. Fourteen days later they were given an alternate form of the test as a surprise test. The experimental group, forty-four undergraduates in an educational psychology class, read and studied the same passage for twenty-five minutes. Before reading, they were told they would be given a multiple-choice test. After taking the test, they were told they would be retested in fourteen days.

The two groups were not significantly different in mean learning or in percentage of material retained from test to retest. The authors concluded that "intention to remember facilitates retention by enchancing original learning rather than by increasing the stability of existing memory traces." (2 p. 92) That is, admonitions such as "Remember that, students; it was important!" do not enhance retention.

Ausubel (4) regards the reader's purpose or intention to learn as a manifestation of a motivational state resulting from either self-directed or explicit instructions. Although Stauffer (23) stresses the importance of helping students develop their own purposes for reading, only one study has examined the effectiveness with which students set and achieve their own purposes (Henderson, 12). Also, only one study has examined the influence of intention to remember on retention of school materials (Ausubel, 2).

Furthermore, it seems generally recognized by educators, psychologists, and educational psychologists that there has been an excess of uncritical application of laboratory learning theory to classroom practice. Therefore, this study used the classroom situation for examination of the influence of different sets of "instructional talk," different directions for reading, on students' immediate and delayed comprehension of material read.

The subjects were 180 undergraduate students-13 males and 167 females-enrolled in the School of Education at the University of Kansas, Lawrence, Spring and Summer semesters, 1970. The reading passage was a 3700-word article entitled: "Why is Classroom Learning a Problem?" from Bigge and Hunt (6). The comprehension measure was a thirty item, four alternate, multiple choice test.

The specific directions for reading, considered as treatments, were:

A. to read to remember for an immediate test only,
B. to read to remember for an immediate test, then (after the immediate test) to remember for a delayed test,
C. to read to remember for an immediate and a delayed test.

To measure the influence of cueing on immediate and delayed recall, half of the subjects assigned to each treatment group were given a test of prior knowledge two weeks before they were given the reading passage.

Figure 1 graphically represents the research designs used by Ausubel (2) and in this study (Williams, 26).

## FIGURE I

### RESEARCH DESIGNS AUSUBEL (1957) AND WILLIAMS (1970)

Ausubel (1957)

| | | |
|---|---|---|
| TA | 02 | 03 |
| TB | 02 | 03 |

Williams (1970)

| | | | |
|---|---|---|---|
| TA | 01 | 02 | 03 |
| TA | | 02 | 03 |
| TB | 01 | 02 | 03 |
| TB | | 02 | 03 |
| TC | 01 | 02 | 03 |
| TC | | 02 | 03 |

Where:

01 = test of prior knowledge (cueing)

02 = immediate test

03 = delayed test

TA = direction A - to read to remember for an immediate test only.

TB = direction B - to read to remember for an immediate test, then (after the immediate test) to remember for a delayed test.

TC = direction C - to read to remember for an immediate test and a delayed test.

## THE QUESTIONS

Six questions were examined in this study. Three questions were concerned with immediate recall and three questions were concerned with delayed recall.

Is there a significant difference in achievement on a test immediately after reading when:

1. students are given different directions for reading?
2. one group of students is cued before reading and another group of students is not cued before reading?
3. the interaction between cueing and directions for reading is examined?

Is there a significant difference in achievement on a test two weeks after reading when:

4. students are given different directions for reading?
5. one group of students is cued before reading and another group of students is not cued before reading?
6. the interaction between cueing and directions for reading is examined?

Since there were three directions (A, B, or C) and two cueing factors (having or not having the test of prior knowledge), to answer these questions a 3 x 2 analysis of variance (Edwards, 8 pp. 115-129) was performed on the immediate and delayed test scores. The .05 level of confidence was used as the criterion for significance.

## ANALYSIS OF THE DATA

Table I presents the analysis of variance of the immediate test scores. An examination of this table reveals 1. an F-value of 0.4977 for the main effect of different directions on immediate testing, 2. an F-value of 1.6768 for the main effect of cueing on immediate testing, and 3. an F-value of 1.5120 for the interaction effects of cueing and different directions for reading on immediate testing. None of these F-values are statistically significant at the .05 level of confidence. Therefore, the answer to questions one, two, and three is no; neither different directions nor cueing nor the interaction of directions and cueing significantly influences immediate recall.

TABLE I

ANALYSIS OF VARIANCE OF THE IMMEDIATE TEST SCORES OF 180 STUDENTS CLASSIFIED AS HAVING OR NOT HAVING THE TEST OF PRIOR KNOWLEDGE AND BY THE DIRECTIONS FOR READING

| source of Variation | Sums of Squares | Degrees of Freedom | Mean Square | F |
|---|---|---|---|---|

| | | | | |
|---|---|---|---|---|
| Directions | 12.6778 | 2 | 6.3389 | 0.4977 |
| Cueing | 21,3556 | 1 | 21.3556 | 1.6768 |
| Directions x Cueing | 29.3444 | 2 | 14.6722 | 1.1520 |
| Within | 2216.0644 | 174 | | |
| Total | 2279.4422 | 179 | | |

Table 2 presents the analysis of variance of the delayed test scores. An examination of this table reveals 1. an F-value of 3.0796, significant at the .05 level of confidence, for the main effect of different directions on delayed testing; 2. an F-value of 6.0793, significant at the .05 level of confidence, for the main effect of cueing on delayed testing; and 3. an F-value of .0913, not significant at the .05 level of confidence, for the interaction effects of cueing and different directions for reading on delayed recall.

TABLE 2

ANALYSIS OF VARIANCE OF THE DELAYED TEST SCORES OF 180 STUDENTS CLASSIFIED AS HAVING OR NOT HAVING THE TEST OF PRIOR KNOWLEDGE AND BY THE DIRECTIONS FOR READING

| Source of Variation | Sums of Squares | Degrees of Freedom | Mean Square | F |
|---|---|---|---|---|
| Directions | 86.5444 | 2 | 43.2722 | 3.0796* |
| Cueing | 85.4222 | 1 | 85.4222 | 6.0793* |
| Directions x Cueing | 0.5444 | 2 | 0.2722 | 0.0193 |
| Within | 2442.9309 | 174 | 14.0513 | |
| Total | 2614.9519 | 179 | | |

*$p < .05$

To discover which of the mean differences for the delayed test with different directions was significant at the .05 level of confidence, Tukey's test for gaps between means as suggested by Guilford (11, pp. 276-277) was used. Table 3 presents the cell means for the delayed test with different directions for reading. An examination of this table reveals a significant difference at the .05 level of confidence between (1) the mean for Treatment A (directions to read for immediate test only)and the mean for Treatment C (directions to read for both an immediate and a delayed test) in favor of Treatment C and (2) the mean for Treatment C and the mean for Treatment

B (directions to read for an immediate test, then, after the immediate test, to remember for a delayed test) in favor of Treatment C.

### TABLE 3

### CELL MEANS FOR THE DELAYED TEST WITH DIFFERENT DIRECTIONS FOR READING

| Directions | | | | | |
|---|---|---|---|---|---|
| A | B | C | $\overline{X}_A - \overline{X}_C$ | $\overline{X}_A - \overline{X}_C$ | $\overline{X}_C - \overline{X}_B$ |
| 17.3167 | 17.8667 | 18.9833 | 1.6667* | 0.5500 | 1.1166* |

*$p < .05$

This analysis suggests that the answer to question four is yes; there is a significant difference in achievement on a delayed test in favor of the direction to read for both an immediate and a delayed test. Likewise, the answer to question five is yes; there is a significant difference in achievement on a delayed test in favor of being cued before reading. However, the answer to question six is no; the interaction of cueing and directions for reading did not significantly influence achievement on the delayed test.

## LIMITATIONS

Before examining the implications of this study, its limitations should be noted. The limitations of this study are:

1. The sample used in this study was predominantly female (13 males and 167 females).
2. The subjects used in this study were all college students.
3. The reading passage was limited to education psychology.
4. The achievement measure was limited to a multiple choice test.
5. Because the results of the tests did not offer tangible rewards, the subjects' motivation to remember may have been weak.

## SUMMARY

The findings of this study indicate that delayed recall of reading material is enchanced by either cueing students by a test of prior knowledge of the material to be read or by giving students explicit directions as to how long they are expected to remember the material read. Retention of information gained through reading is influenced by the intention with which the reader enters the reading situation. Cueing by a test of prior knowledge may facilitate retention of the material read by serving as an anchor or advanced organizer for the reader. Cueing may also provide the reader with some implicit or subconscious intention to remember what is read.

## IMPLICATIONS

Reading is a dynamic, perceptual-cognitive process involving an interaction between a reader and a reading passage which results in some level of understanding of what is read. However, understanding what is read is but an intermediate phase in the reading process; the final phase, the high point of the reading act, is the utilization of what is read. Retention of what is read is necessary for utilization. The findings of this study indicate that intention to remember facilitates retention of learned verbal material when the intention is present during original learning. Retention is not facilitated when the intention to remember is given after the original learning has taken place.

Reading undertaken with the expectation of a test a few weeks later facilitates greater delayed retention than reading done without the expectation of being tested. Therefore, if teachers view the purpose of reading to be for students to remember what they have read only for a test of comprehension immediately after reading, then it does not seem to make any difference what directions students are given for reading or if they are cued for reading by a test of prior knowledge. However, if teachers view reading as having the larger purpose of retention and utilization of what is read, then they may intensify retention of reading material by giving explicit directions of the expectation for retention and by building readiness for reading. Learning under the influence of an intention to remember for delayed recall is superior to admonitions to remember after original learning has taken place.

An obviously appropriate time to give explicit expectations and readiness experiences is during the assignment period. Most textbooks on reading in the content areas discuss the assignment period. The author has found the IF-THEN GOAL SETTING strategy developed by Reieter (19) particularly useful. This technique opens communication between the teacher and himself, the teacher and the student, and the student and himself. "The purposes of the reader, as clarified by prereading discussion, teacher's questions, or by the reader himself, determine the type or kind and degree of comprehension that he achieves." (Spache and Spache, 22, p. 467).

## RECOMMENDATIONS FOR FURTHER RESEARCH

1. Because the subject group in this study was predominantly female, future research should attempt to have a more equal distribution of the sexes.

2. Studies using subjects in elementary school, junior high school, and high school are needed for greater generalizability of the findings.

3. Studies using a variety of subject matter as reading material are needed to examine the influence of intention to remember on different content materials.

4. Studies using criterion measures other than multiple-choice tests are needed to measure specific types of comprehension influenced by various directions for reading.

5. Studies are needed which measure the influence of some tangible reward for performance on immediate and delayed tests.

6. Studies of the influence of directions to read for a delayed test on immediate and delayed retention are needed to examine the effect of intention to remember for future recall on immediate recall.

7. Studies of the effect of no explicit directions for reading on immediate and delayed recall are needed to affirm the hypothesis that specific directions for reading enhance comprehension.

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# THE READING AND STUDY CENTER AS A RESOURCE FOR THE UNIVERSITY ACADEMIC COMMUNITY

## A Partnership For Learning

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In this report I will set forth the results of an innovative educational experiment conducted at UCLA by a professor of Psychology working with Reading and Study Center staff. Dr. Morris Holland, assistant professor of Psychology, sought our aid in a plan to enlist student skills and initiative in a cooperative learning experiment. One testament to its success, in addition to overall grade performance, was the way students evaluated it in comparison to other sections of the Introductory Psychology course.

### RATIONALE FOR THE EDUCATIONAL EXPERIMENT

Holland believes that students working together in groups can learn more from each other than they can in the conventional lecture. This group format provides unique learning experiences and frees the professor to work with students in ways not otherwise possible. With his lecture time reduced from four to three times a week, Holland took the extra time for consultation with the groups and the individuals who comprised them. The division of large classes into quiz sections or discussion groups is not new. However, new feature is the leadership of the groups which comes from selected students in the class rather than from advanced or graduate students. The purpose of the formation and the function of the groups was another new dimension.

A fundamental premise is that maximum learning cannot take place if that learning experience is separated from the main stream of the student's life. To illustrate this point, Holland refers to Abraham Maslow's citation of basic needs discussed in his book, Toward a Psychology of Being. Maslow identifies these needs as those of "Safety, Belongingness and Identification, Close Love Relationships, Respect and Prestige." If many undergraduate students exhibit a need for Belongingness and Identification, then their academic learning, to be truly effective, must speak to that need. If this seems overly idealistic, we must ask what is the purpose of education in a democracy? If any part of the answer is that education prepares students to operate as effective members of a variety of groups, then Holland's learning design could provide practical training in these relationships. Fortunately, part of the subject matter of the Introductory Course deals with principles of human behavior. Thus the course lends itself to this particular combination of experience and content.

On the basis of past teaching experience with classes divided into groups, Holland had become convinced that an atmosphere of trust was essential to produce cooperative learning. One essential of cooperative learning is that each person shares in the teaching. The learning of each individual is relative to the sum total of that of the group. The task of the trained student leaders was to develop a group feeling among those students assigned to them and to facilitate the cooperative learning that was the end product of the group projects in which they were engaged. The term "trained student leaders" will be used to designate those student leaders who worked with us in the Center, in contrast to the "untrained leaders.") Our counselor teams, of course, were also competent to transmit insights into the reading and study skills pertaining to the course content and assignments.

## NATURE OF THE EXPERIMENT

### Procedure

The psychology class of three hundred fifty in the fall quarter was divided into forty-four groups with 22 males and 22 females chosen as leaders. The choices were made from volunteers whose scores placed them among the top third of the class on a reading test (taken from text) and among the top one-half on an empathy test. As an incentive for the time the training required the trained leaders received a grade point higher than they would have earned without training participation. Eleven males and eleven females were to be untrained, seven of the males and seven of the females would have four training sessions of two hours, and four males and four females would have seven training sessions of the same duration. (The significance of the effect of the extended sessions has not been established).

### Outcomes to be Evaluated

1. Mid-term performance.
2. Final Exam grade.
3. Performance on group projects assigned:

   Psychological Biographies. Put names on slips of paper. Put slips in center of group. Draw someone's name. Interview him. Try to find out "what makes him tick." Write one page in which you characterize him; you describe him the way he "really is." (Each member is responsible for one biography.)

Research Paper. Write a five-page paper based on three related articles found in psychology journals located in the Ed/Psych library.

Human Behavior Inventory. Observe, categorize, and count some aspect of human behavior. Write a report indicating exactly what you did and what your results were.

Animal Learning Project. Modify the behavior of some animal through operant conditioning procedure. Write a report indicating what you did and what your results were.

4. Class evaluation by each student.
5. Group evaluation by each student member.

## HYPOTHESES

1. Trained leaders would do better themselves in terms of grades since their own skills and motivation would have improved.
2. The grade performance of members of groups would be better with trained leaders than those with untrained leaders.
3. There would be an increase in the positive attitude toward the course and the group experience on the part of those who were members of groups with trained leaders, in contrast to the reaction of those with untrained leaders.

## DESCRIPTION OF TRAINING IN READING AND STUDY CENTER

The twenty-two group leaders met in three groups at our center. None of the student leaders had any idea of what they would be doing, other than experiencing some kind of group dynamic process which would enable them and their groups to work together on the four projects assigned. None of them had worked previously in our center or had any idea of what we did there.

Our six counselors, divided into three teams, had worked together in study seminars, reading groups, and other small group projects, but none of us had previous experience of this nature. Each team did some pre-planning and the six shared ideas of what we hoped might happen, but there was no carefully structured outline of what we expected to do. We all shared a trust in the quality of each other's work and a belief that the needs of students were primary. We worked in the counselor mode, rather than in an instructional one. We believed in the possibility and potential value of cooperative learning. We knew that we wanted our group meetings with the leaders to be a model of the kinds of relationships we hoped would develop in the groups they would head.

The first session set the climate and established a model for our subsequent meetings. This climate resulted from the behavior of the counselor teams. It was soon quite clear that we were not going to assume the responsibility for the group and the ensuing training in group process. One of our first tasks was to convince the students that there was no hidden agenda and no instruction from Holland concerning what we or they were expected to do. In our open manner with them and with each other it became apparent that all of us together would need to decide what we wanted to do and how we wanted the four sessions to develop.

The situation was an ambiguous one, yet it freed our energies. In the initial session, counselors and students leaders shared the past experience of leadership and personal resources with which to approach this task. We discussed the differences between autocratic and democratic leadership. Some of the students had previous experience with cooperative groups. The functioning of those groups and the role of the leader was examined. We shared feelings of inadequacy and began to sense the kind of support we could find from each other.

Each group leader left that first session expressing confidence, excitement, and feelings of warmth as he anticipated his first meeting with his group later that week. The discussion of those first meetings and the sharing of those experiences were the substance of the next training session. Because feelings were shared, there was the recognition that dealing with emotions was acceptable and important. The four tasks that were the charge of each group were discussed. At this point the counselors referred to the study skills input they could offer. Two of the groups refused to consider them. The remaining group's members expressed some interest in our survey approach to the textbook and to the format of writing a research report, but no more than forty-five minutes was devoted to this work. These were competent students, and this information was not their primary need.

All was not sweetness and harmony. There was conflict; it was recognized, resolved, and the process of conflict and resolution examined. The role of a leader as facilitator, mediator, mover, catalyst, observer, and as a group member was examined. The model was the behavior of the counselor training teams. By the end of the fourth session the feeling of closeness was so great that at least one of the students leaders groups continued to meet independently throughout the quarter. (The controls of the experiment prohibited the counselor teams from meeting with the students more than a specified amount of time.) All of the counselors regretted the conclusion of the fall quarter experiment and looked forward to the winter quarter groups.

## RESULTS OF THE FALL QUARTER EXPERIMENT

What was the academic performance of group leaders? (Course grade A-4, B-3, etc.) (Additional grade-point bonus not reflected here.)

Trained leaders 3.11
Average 3.08
Untrained leaders 3.06

The first hypothesis was not validated, since there was no significant difference in the grade performance of the trained leaders. Of significance is the fact that the grade performance on the mid-term was considerably higher for the trained leaders, but did not hold for the total performance. It may well be that the extra energy went into the performance of the group. One notes also that both sets of leaders were competent students.

What was the academic performance of group members? (Course grades)

In groups with trained leader 3.00
Average 2.92
In groups with untrained leader 2.85

The effect of leader training on non-leader course grades (i.e. 3.00 versus 2.85) was significant at the .05 level (test) Summary: The grades of those groups with trained leaders were significantly higher than those of untrained leaders.

Relation of average course grade for a group (excluding leader) to the leader's grade. (Correlation of leader's course grade to his member's course grade.)
For trained leaders-Spearman rho = .13 (not significant)

For untrained leaders-Spearman rho = + .59 (significant at the .01 level)

Holland concluded that the lack of correlation between the trained leader and his group shows the effectiveness of the training. The learning of each group member was his own and not dependent upon the performance of the leader. The leader did not impose his authority on the group nor did he do the work of the group. One must keep in mind that the academic performance of group members under trained leaders were higher as a whole than those under untrained leaders.

How did students like their groups? (Measured with 18-item TV scale)

1. Group evaluation by leaders (highest possible-18)
   Trained 15.28
   Average 15.07
   Untrained 14.84
2. Group evaluation by non leaders
   In group with trained leader 14.87

Average 13.83

In group with untrained leader 13.17

T = 2.34

P .05 significance

3. As function of sex

| | | Member Sex | | |
|---|---|---|---|---|
| | | M | F | |
| Leader | M | 14.46 | 15.04 | 14.75 (Male leaders liked more by females) |
| Sex | F | 13.45 | 12.51 | 12.98 (Female leaders liked more by males) |
| Average = | | 13.95 | 13.78 | |

How did students like their leaders? (evaluate the leader's contribution to group)

Measured with 3 item TF scale.

Evaluations of leaders by non-leaders (highest-3)

| | |
|---|---|
| Trained | 2.56 |
| Untrained | 2.66 |

Since the trained leaders did not behave as the authoritarian leaders the members might have expected, they were not rated as highly as to leadership. One must keep in mind that the members of trained leader groups rated their group experiences more highly than those of the untrained. The leadership training was effective.

## SUMMARY

We have more than statistics to show the success of the experiment. Holland's reaction to the effectiveness of the training was that he felt that all leaders of winter quarter groups should have it. He altered the selection procedure so that students whose scores were both in the lowest third of the reading test and the lower half of the empathy test were among the sixty leaders trained. No bonus grade was given since Holland felt that the four training sessions constituted a reward in themselves. Since 60% of the class volunteered for leadership, there would seem to be validity in his assumption. He wanted more students to have the opportunity to lead participatory groups. An outcome for students selected for leadership with an opportunity for training and experience improved the performance of those chosen. At the conclusion of the winter quarter, the grade point achievement of those leaders at the bottom of both the Reading test and the Empathy test was 3.06.

This study carries significant implications for those who work with students as they are being trained as subject tutors and peer counselors. Reading and study skills personnel can become more aware of the significance and the quality of their interaction and relationship with students. Students can gain and redefine leadership qualities if they are provided opportunities for leadership. The success of the experiment gives us hope that the democratic process can work in education. Finally, by pooling the efforts of a member of the academic community and a student service center, unique results were achieved and, perhaps, a door opened to future adventurers.